

**University of Toronto
Faculty of Arts
and Science
ERINDALE COLLEGE
Mississauga
Calendar 1975-76**



**Erindale College
University of Toronto
1975-1976**

IMPORTANT NOTICES

1. Students who have any problems of an academic or personal nature should consult their Registrar.
2. The courses listed in this Calendar are those available to students of Erindale College and are subject to withdrawal or alteration without prior notice.
3. Fees, residence dues and other charges set forth in this Calendar are subject to change.
4. Two other Calendars are published by the Faculty of Arts and Science, University of Toronto. They are the St. George Campus Calendar and the Scarborough College Calendar.

Cover designed by H. Witkowski

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Sessional Dates 1975–1976

WINTER SESSION 1975–76

1975

April 25	Last date for return of applications for admission scholarships
June 1	Last date for re-registration of former students not in attendance in the previous session — transfer from part-time to full-time studies — College transfers
July 1	Last date for new students, both regular and special, to apply for admission to part-time studies
August 1	Last date for receipt of applications for admission of new regular and special students to full-time studies
August 15	Last date for students with standing in the Faculty to request registration as special students
September 1	Labour Day. University closed
September 2–3	Registration of First-Year students
September 4–5	Registration of Second-Year students
September 6	Registration of Fourth-Year students
September 8–9	Registration of Third-Year students
September 10	Classes begin. The late registration penalty will be enforced
October 3	No changes in full courses or in first-term (F) or in (H) half-courses may be made after this date
October 13	Thanksgiving Day. Classes cancelled
November 15	Last date to complete the following: — confirmation of enrolment in courses and programmes by each student in the office of his College Registrar between October 30 and November 15 — withdrawal from a fall term (F) course without academic penalty — Third-Year students to notify their College Registrars if they wish to receive their degree — Fourth-Year students to indicate their choice of degree
December 4	Fall Convocation
December 10	First-term classes end. All term work in “F” courses to be completed by this date
December 11–19	Examination period for (F) courses and term-test period for multisection courses
December 20	Christmas holidays begin

1976

January 2	Second-term instalment of fees due
January 5	Second-term classes begin
January 15	Final date for payment of tuition fees without penalty
January 16	No second-term (S) course may be begun after this date
February 15	Last date to withdraw from one or more courses or half-courses (S) or (H) or from the University without academic penalty
February 16–20	Reading week — lectures and laboratory classes will not be held
April 9	Classes end. All term assignments should be completed no later than this date

April 16	Good Friday. University closed
April 19	Winter session examinations begin
May 7	Winter sessions examination end
June 1	Last date to submit requests to transfer to full-time studies for 1976-77 session
July 10	Last date for students with supplemental privileges to apply to write the Summer session examinations

SUMMER EVENING SESSION 1975

April 1	Last date for new students, both regular and special, to apply for admission
April 15	Last date to return early course selection forms
May 7-9	Registration period
May 12	Classes begin in full courses and (F) and (H) half-courses
May 19	Victoria Day. University closed
May 23	Last date to change full courses and (F) and (H) half-courses
June 6	Last date to withdraw from an (F) half-course without academic penalty
June 19	Classes end in (F) half-courses. All term work in such courses to be completed by this date
June 30	Last date to withdraw from a full course and an (H) half-course without academic penalty
July 1	Dominion Day. University closed
July 2	Classes begin in (S) half-courses
July 9	Last date to change an (S) half-course
July 10	Last date for students with supplemental privileges to apply to write the August examinations
July 15	Last date for students who expect to graduate at the Fall Convocation to notify their College Registrars
August 1	Last date to withdraw from an (S) half-course without academic penalty
August 4	Civic Holiday. University closed
August 8	Classes end in full courses and (S) and (H) half-courses. All term work to be completed by this date
August 11-15	Summer session examinations

SUMMER DAY SESSION 1975

May 15	Last date for new students, both regular and special, to apply for admissions
June 1	Last date to return early course selection forms
June 25-27	Registration period
July 1	Dominion Day. University closed
July 2	Classes begin in full courses and (H) half-courses
July 9	Last date to change full courses and (F) half-courses
July 10	Last date for students with supplemental privileges to apply to write the August examinations
July 15	Last date for students who expect to graduate at the Fall Convocation to notify their College Registrars
August 1	Last date to withdraw from a full course and an (H) half-course without academic penalty
August 4	Civic Holiday. University closed
August 8	Classes end. All term work to be completed by this date
August 11-15	Summer session examinations

Administrative Staff

University of Toronto

Chancellor

President

Vice-President and Provost

Director of Admissions

Principal, University College

Principal, Woodsworth College

Dean, Faculty of Arts and Science

Associate Dean

Associate Dean

Associate Dean

Assistant Dean and Secretary

Eva M. MacDonald, M.D., C.M., D.P.H.

J. R. Evans, M.D., D.Phil., F.R.C.P. (C), LL.D.

D. F. Forster, B.A., A.M.

W. Kent, B.A., M.A.

A. C. H. Hallett, B.A., Ph.D.

A. M. Kruger, B.A., Ph.D.

R. A. Greene, B.A., M.A., Ph.D.

J. E. Cruise, B.A., M.S., Ph.D.

R. H. Farquharson, B.A., M.A., Ph.D.

E. V. Swenson, B.A., M.S., Ph.D.

W. D. Foulds, B.A.

Erindale College

Principal and Dean

Executive Assistants to the Principal

Associate Dean

Associate Dean

Associate Dean

Registrar

Associate Registrar

Associate Registrar

Librarian

Budget and Planning Officer

Manager, Physical Plant Services

Director of Student Housing

Student Aid Officer

Health Service

E. A. Robinson, Ph.D., D.Sc.

L. E. Seppala — Academic Affairs

J. E. Shane — Publicity, College and Community Events

W. J. Huggett, M.A., Ph.D.

I. M. Spigel, M.A., Ph.D.

H. W. Taylor, B.Sc., M.Sc., Ph.D.

J. J. Rae, M.A., Ph.D.

L. J. Elmer, B.A., S.T.B., S.T.D.

M. Cooper, B.A.

H. L. Smith, B.A., B.L.S.

R. S. Rawlings, B.A.

A. Opalinski

M. J. Lavelle, B.A., M.A.

Mrs. L. Webber

E. G. Davies, B.Sc., Phm.B., M.D., C.C.F.P. (C)

R. P. Davis, M.B., Ch.B., D. Obstet., R.C.O.G.

G. W. Tisdall, M.D., D.Psych., C.R.C.P. (C)

P. D. Wardle, M.D., M.R.C.S., L.R.C.P.L.

V. I. Degutis, Reg.N.

Erindale College Faculty

(As of 1974-75)

Principal

Associate Dean

Associate Dean

Associate Dean

Professor E. A. Robinson

Professor W. J. Huggett

Professor I. M. Spigel

Professor H. W. Taylor

ANTHROPOLOGY

Professor W. M. Hurley

Professor F. J. Melbye

*Professor A. Mohr

Professor L. W. Reinhardt

Professor L. L. Sample

Professor B. A. Sigmon

Professor R. Vanderburgh

ASTRONOMY

*Professor J. R. Percy

Professor R. Racine

BIOLOGY

Botany

Professor J. F. Ammirati

*Professor P. W. Ball

Professor W. R. Cummins

Professor W. G. Filion

Professor P. A. Horgen

Professor P. F. Maycock

Professor J. Svoboda

Professor G. R. Thaler

Microbiology

*Professor A. Guha

Professor J. C. Silver

Zoology

Professor N. C. Collins

Professor D. L. Gibo

Professor G. K. Morris

Professor D. H. O'Day

*Professor P. J. Pointing

Professor B. I. Roots

Professor W. G. Sprules

CHEMISTRY

Professor J. M. Deckers

Dr. D. F. Keeton

Professor M. Moskovits

Professor G. A. Ozin

Professor A. J. Poë

Mrs. J. C. Poë

Professor E. A. Robinson

*Professor I. W. Still

Professor M. A. Winnik

CLASSICS

Professor R. L. Beck

*Professor T. G. Elliott

Professor C. I. Rubincam

COMMERCE

Professor J. Amernic

Professor L. J. Brooks

Professor G. S. Day

Professor A. W. Honickman

Professor R. A. Long

Professor S. R. Maxwell

*Professor M. Berkowitz

Professor J. E. Dooley

Professor W. E. Grasham

Mr. H. E. McCandless

Professor M. Murenbeeld

Professor D. B. Thornton

COMPUTER SCIENCE

*Professor C. R. Crawford

Mr. Scott Graham

Mr. E. C. Hehner

Professor R. A. Mathon

DRAMA

*Mr. J. Astington

Mr. U. Kareda

EARTH AND PLANETARY SCIENCES (<i>Geology and Geophysics</i>)	Professor D. H. Gorman *Professor H. Halls *Professor M. Kimberley *Professor G. W. Pearce	*Professor P.-Y. Robin Mr. R. M. Stesky Dr. R. Vicencio
ECONOMICS	Professor T. Dick Professor W. T. Easterbrook Professor S. Eddie Professor J. E. Floyd Professor M. A. Fuss *Professor M. J. Hare Professor J. A. Hynes	Professor N. M. Meltz Professor J. Pesando Professor D. Pokorny Professor S. A. Rea Professor F. Reid Mr. F. Wintrobe
ENGLISH	Professor T. H. Adamowski Mr. J. Astington Professor B. Corman Professor V. A. DeLuca Professor J. Dutka Dr. D. Godfrey Professor D. B. Hill	Mr. U. Kareda Professor D. I. Lancashire Mr. M. Levene Mr. R. R. McLeod Professor J. Skvorecky *Professor R. W. Van Fossen
FINE ART	*Professor L. Eleen	
FRENCH	Mrs. G. Chesneau Professor C. Cloutier-Wojciechowska Mrs. M. Ducretet Mrs. J. LeGall	Professor A. L. Stein Professor D. A. Trott *Professor H. H. Weinberg
GEOGRAPHY	Professor Emeritus: D. F. Putnam *Professor H. Andrews *Professor P. Duckworth Dr. G. H. Gad Professor G. Gracie Professor W. Harrison	Professor C. J. Houston Professor T. F. McIlwraith Professor J. C. Munday Mr. D. S. Munro Professor R. White
GERMAN	Professor W. Meyer-Erlach *Professor C. Saas	Mr. K. O. Steinmetz
HISTORY	Professor C. A. Cannon Mrs. G. P. Cuthbert-Brandt Mr. M. Dafoe Professor A. C. Gluek Mr. R. E. Johnson	Professor C. LaVigna *Professor D. P. Morton Professor D. L. Raby Professor W. B. White
ITALIAN	*Mr. L. T. McCormick	Miss A. Testaferri
MATHEMATICS	Professor D. F. Andrews Professor T. Bloom Professor P. H. Fantham Professor I. Graham Professor V. Jurdjevic Professor W. D. Lakin Professor J. E. LeBel	Professor P. Prescott Professor L. M. Rosen Mr. J. B. Selliah Professor F. D. Tall Professor S. M. Tanny *Professor S. M. Trott

MUSIC	Professor G. Jones	Mr. N. Rubin
PHILOSOPHY	Professor J. V. Canfield Professor C. E. Cassin Ms. C. Cornwall Professor L. J. Eshelman	*Professor W. J. Huggett Professor G. Nagel Professor A. Rosenthal Professor A. I. Urquhart
PHYSICS	Professor R. F. Code Professor D. J. Dunlop Dr. R. G. Johnson Dr. James Matthews Professor P. P. Meincke	Mr. N. Reid Professor G. I. Stegeman Professor H. W. Taylor *Professor S. H. Vosko Professor S. S. M. Wong
POLITICAL SCIENCE	Professor J. Barros Professor W. F. Berns *Professor R. B. Day Professor R. A. Fenn Professor P. W. Fox Professor R. Gregor Professor A. A. Kontos	Professor S. A. Lakoff Professor F. W. Peers Professor D. V. Smiley Professor J. E. Smith Professor P. H. Solomon Mr. J. C. Terry
PSYCHOLOGY	Mrs. R. Abramovitch Professor T. M. Alloway Professor K. R. Blankstein Professor C. M. Corter *Professor F. I. Craik Professor L. Krames	Professor M. Moscovitch *Professor P. Pliner Professor R. M. Rosenbaum Professor B. A. Schneider Professor I. M. Spigel Professor S. E. Trehub
RELIGIOUS STUDIES	*Professor L. J. Elmer Mr. M. J. Lavelle	Mr. S. A. Nigosian Mr. L. E. Schmidt
SLAVIC LANGUAGES & LITERATURE	Professor K. Lantz *Professor N. N. Shneidman	
SOCIOLOGY	Professor H. Boughey Professor H. J. Breslauer Professor J. L. Hagan Mr. J. Heap *Professor W. Kalbach	Professor J. B. Kervin Professor P. Lorion Professor E. T. Silva Professor J. Simpson Professor M. W. Spencer
SPANISH	Professor O. Hegyi Professor E. G. Neglia	*Professor M. Scarth Professor J. R. Webster
SURVEY SCIENCE	*Professor G. Gracie Professor R. C. Gunn	Professor D. W. Lambden

*Faculty Advisor

Principal's Message



E. A. Robinson, Ph.D., B.Sc.

This year marks the entry of the ninth freshman class into the College and, since the first students entered Erindale College in 1967, the academic community on the University of Toronto's Erindale Campus will have grown to more than 3000 full-time students in the winter session. It also marks the start of a slowdown in growth because the existing facilities can accommodate a maximum of 3500; entry to the College will become more competitive. Although Erindale College was conceived as a College for 5000 full-time students we have thus reached a plateau in growth. This will have the advantage, after a number of years of very rapid expansion, of giving the community a period of consolidation in which to concentrate on improving the quality of the academic environment and enhancing existing strengths, which are considerable.

Erindale is a close-knit community of students, professors and staff. It combines advantages of membership in Canada's largest University with qualities only possible in a Col-

lege of moderate size. Erindale has always striven to provide for its students the best that these advantages provide and we are fortunate in having built an excellent teaching staff which is dedicated to academic excellence and the provision of an environment in which each student can freely participate in the best that the University of Toronto has to offer. This objective is encouraged by the natural beauty of the campus and great care has been taken to preserve and enhance what nature has generously provided on the banks of the Credit River. The campus is ideal for recreation and for academic study. It is heavily utilized in the study of ecological problems and those areas of research that require a natural habitat.

As Erindale has grown, so has the research and scholarly activity of its faculty, which is now making an important contribution to the work of the University. A large number of graduate students are located at Erindale.

Erindale's townhouse residences provide pleasant accommodation for some 300 students on the campus. It is hoped that an additional 200 places in residence will be provided for the start of the 1976-77 academic year.

My best wishes to all of those students who will be on campus this academic year, and a particularly warm welcome to those who will be joining us for the first time. Erindale has much to offer. I hope that all will fully enjoy its rich life.

General Information

Erindale College, one of the eight Colleges that constitute the Faculty of Arts and Science in the University of Toronto, opened in September 1967, as a suburban campus of the University of Toronto. The College offers the Arts and Science Programme of the University of Toronto and students may qualify for the Bachelor of Arts or Bachelor of Science degree in either a three or four year programme. A Bachelor of Commerce degree is also offered. The admission regulations are those of the University of Toronto.

Erindale College is located twenty miles west of downtown Toronto in the City of Mississauga. It may be reached by taking the Queen Elizabeth Highway, or Highway 5, or the Macdonald Cartier Freeway (401) to Mississauga Road. (See the map on back cover.)

A bus service is provided for staff and students between the College and the Islington-Bloor Subway Station, the St. George Campus (Convocation Hall), Oakville, Clarkson, Streetsville and Brampton.

Students wishing information about the College should address: The Registrar, Erindale College, 3359 Mississauga Road North, Mississauga, Ontario, L5L 1C6 or by telephoning 828-5231 or 828-5331 (area code 416). Part-time students should call 828-5244.

Counselling

Every effort is made to provide students with both general and special counselling in all areas of personal concern, i.e. academic, medical, psychiatric, financial and vocational.

The offices of the Deans and Registrars are the normal places for general counselling and advice on day to day queries or problems.

In areas where specialized assistance is needed the Registrar's Office will refer the student to the appropriate service. Prospective students are urged to obtain academic counselling, course selection assistance, etc. from the Registrar's Office or Faculty Advisors during the summer months.

Library

Erindale College Library has an excellent and ever-growing collection of books, periodicals, film strips, cassettes, clippings and other materials now numbering 140,000 items. This extensive library is staffed with people trained to help the student use the Library's resources.

In addition to the College Library, students and faculty have access to more than two million volumes of the University of Toronto Libraries on the St. George Campus. There is a regular book delivery service from the University of Toronto Libraries to the Erindale Campus.

University Health Service

The University Health Service offers a partial but reasonably comprehensive medical service for students on the Erindale Campus throughout the academic year for treatment and advice. Students are encouraged to discuss their concerns about contraception, drug problems, unwanted pregnancies, sexual life and venereal disease. An infirmary service (October 1 to May 15) is available as is extensive treatment and care for athletic injuries.

Psychiatric consultation and counselling to assist the students with emotional and social problems are readily available.

The primary responsibility of the Health Service is to the student, therefore, all consultations, medical and psychiatric, are strictly confidential and form no part of any "University Record." Information acquired from students will not be given to anyone at anytime without the express permission of the student.

HEALTH SERVICE HOURS

Monday to Friday 9:00 a.m. – 5:00 p.m. Telephone 828-5255

To Obtain a Physician's Advice:

Evenings, Nights, Weekends and Holidays:

Monday to Friday, 5:00 p.m. to 9:00 a.m. 279-1700

Friday 5:00 p.m. to Monday 9:00 a.m. 928-2458

ATHLETIC REQUIREMENTS

Physical examination is recommended for those taking part in competitive body contact sports.

Student's Administrative Government of Erindale (S.A.G.E.)

The Student's Administrative Government of Erindale serves as an important link between students and the Administration of the College and University. Elections are held yearly to select officers who provide for the cultural and social needs of the students. S.A.G.E. sponsors Radio Erindale, a newspaper, ethnic clubs, concerts, lectures and a pub. It is an organization that tries to stimulate student interest outside the classroom, with programmes that are student-oriented and aimed to encompass the entire campus community and in some instances the local community of Mississauga. All undergraduate students of the College are members of S.A.G.E. and are entitled to attend meetings, sit on commissions and vote.

Student Publications

Medium II, a weekly student newspaper focuses on campus and community events, news, reviews, and features.

The Laomedon Review, a bi-yearly creative writing journal, contains literary works which include poetry, prose, drama, and criticism.

Both are published by The University Journal. All students are encouraged to assist in the successful operation of the above projects.

Athletics and Recreation

The Athletic and Recreation Department, in conjunction with the Erindale College Athletic and Recreation Association (ECARA), is responsible for the planning and operation of programmes for the Erindale College community.

The programme is wide in scope, including instruction, activity clubs, intramural leagues for men and women, co-educational recreation, and college teams. Most of the programmes take place in the recently completed physical facilities on campus which include a gymnasium, training room, teaching studio, recreation room, and three squash courts. At present, Erindale College teams compete in the University of Toronto Interfaculty league and with other colleges and universities on an exhibition basis.

In addition to the facilities and programmes on the Erindale Campus, students may use the facilities on the St. George Campus as well as participate in their on-campus and intercollegiate programmes.

Residences

Erindale College offers residence accommodation for up to 290 students.

Townhouse style residences make it possible for students to share living expenses on a co-op basis. Students have estimated they can save up to \$200 per year by preparing their own meals. Each unit also governs itself cooperatively.

Four-person units have four single study bedrooms, plus living room, kitchen and living areas. Six-person units are made up of two double study bedrooms, plus communal kitchen and living areas. There is a common laundry facility for each eight units. Residences are just a few minutes' walk from the library, classrooms, and cafeterias where students can buy meals when they wish.

Costs are \$640.00 per year, September to May, for a single; \$590.00 per year, double.

For further information contact the Housing Office, Room 11, Erindale College, 3359 Mississauga Road North, Mississauga, Ontario, L5L 1C6 or telephone 828-5286.

Third Year Study Elsewhere

Information concerning this programme can be obtained from the St. George Calendar and from Mrs. L. Webber, Student Aid Officer, Erindale College by telephoning 828-5234.

Foreign Students

The University of Toronto, International Centre (I.S.C.) is anxious to be of service to foreign students. Pre-departure advice, information on arrival, accommodation, cost of living, financial aid, employment, food, health requirements, insurance, etc., is readily available. Foreign students should write to: International Student Centre, University of Toronto, 33 St. George Street, Toronto, Ontario, Canada M5S 1A1.

Admission Requirements

Full details of the University of Toronto undergraduate admission requirements for 1976 are contained in the Undergraduate Admission Handbook 1976–77, available on request from the Office of Admissions, University of Toronto, Toronto, Ontario, Canada, M5S 1A3, and in all Ontario secondary schools. The 1975 requirements follow.

Basis of Admission

Entrance to the First Year of the undergraduate courses is offered, depending upon the number of places available, to candidates from Ontario secondary schools who demonstrate good standing, based upon the following evidence:

1. Completion of secondary school studies, including a *full programme of academic work at the grade 13 level*.
2. A recommendation by the secondary school last attended regarding probable success in University studies.
3. A complete academic report for the last three years of secondary school.

Note: Individual applicants may, if they so wish, present the results of standardized tests offered by the Service for Admission to College and University (SACU) as additional evidence of their aptitude. Such information will be considered by admission and scholarship committees on an individual basis.

Recommended Principles of Subject Selection

1. Throughout the secondary school years students should study in as many of the following areas as possible: English, French and other languages, mathematics, sciences, social studies. Students should also consider carefully what aspects of their projected university work will entail prerequisite studies.
2. A full grade 13 programme should normally include work in a variety of subjects.
3. Subjects recently introduced into the grade 13 curriculum will be recognized by the University, which continues, however, to place a high value on subjects involving study over a period of years and such subjects should normally constitute the major part of a grade 13 programme presented for admission.
4. Candidates are advised to include in their grade 13 programme at least two of: English, French or other language, mathematics, science.

Notes for Students

1. No minimum mark or percentage is prescribed for admission to the University, but because of the pressure of applications and the nature of the University courses it is likely that a student will require a school average above 60% in order to be considered for selection.
2. The University of Toronto does not specify the minimum number of years to be spent in secondary school. If a school's organization permits certain students to complete their studies to the end of grade 13 in fewer than five years, applications will be welcomed from those students. The University does not accept applications from students at the end of their grade 12 work.
3. If a student takes more than one year to complete his grade 13 studies, the University expects correspondingly higher standing; extenuating circumstances are considered if reported by the school.
4. The Ministry of Education announced in H.S. 1 1974–75 that it will grant one academic credit at the grade 13 level for Royal Conservatory of Music of Toronto (RCMT) certificates Grade IX Practical and Grade III Harmony (or equivalent). There will be one year during which, at the principal's discretion, Grade VIII Practical and Grade II Rudiments will continue to be accepted

as the equivalent of one grade 13 credit. The University of Toronto will adopt the same practice as the Ministry for admission in 1975.

5. Applications are considered from students whose credentials do not comply with the entrance requirements of the University, but, as fully qualified applicants outnumber the entrance places annually available, such students are expected to offer evidence of exceptional attainments to compensate for entrance deficiencies.
6. Candidates from educational jurisdictions outside Ontario should present a subject pattern which generally conforms with this announcement and in addition specifically prepares them for their own universities. They may improve their competitive position by taking the aptitude and applicable achievement tests offered by the Service for Admission to College and University or the aptitude test offered by the College Entrance Examination Board. For information they should write to the Service for Admission to College and University, 151 Slater St., Ottawa, Canada, K1P 5N1, or to the College Entrance Examination Board, Box 592, Princeton, New Jersey, 08540, U.S.A.

Application Procedures

Candidates currently in Ontario Grade 13 should apply through their high school using the general application for admission to an Ontario university.

All other candidates should write to the Office of Admissions, giving details of their previous academic work. If, after evaluation, a candidate appears eligible for admission consideration, he will receive an official application.

Final Date for Submitting Applications

August 1. Applications received during August may be considered, but a 1975–76 admission cannot be guaranteed.

Non-Matriculants (Mature Students)

An applicant who is at least 21 years of age, but who has never attempted an Ontario Grade 13 programme, or its equivalent, and who has been a resident of Ontario for at least one year, will be considered for admission to the Faculty of Arts and Science upon completion with high standing of one of the Pre-University courses offered by Woodsworth College. Persons wishing to apply as non-matriculants should consult the Office of Admissions about their eligibility before undertaking one of the Pre-University Courses since successful completion of a Pre-University Course does not in itself ensure selection.

Admission to Advanced Standing

An undergraduate of another university or another faculty in this University may be admitted to advanced standing on such conditions as may be prescribed and must apply to the Office of Admissions. Advanced standing credit is awarded to students who at another university or faculty have taken work which is equivalent in content to work which would have been taken had they been enrolled in this Faculty. Each application is considered individually in terms of the student's previous record and the courses offered in the Faculty.

An applicant for admission to advanced standing must submit the Ontario Grade 13 certificate or equivalent; and an official transcript of his record in the university or faculty from which he wishes to transfer, showing the specific courses in which he has completed with his standing in each.

Application for Admission and Registration

Students currently in Grade 13 apply for admission to the University of Toronto on *Application Forms* provided by the Secondary Schools. If the application is accepted a *Letter of Admission* is sent to the student. Forms for course selection and information on registration procedures follow during the summer. The final step in Registration is the payment of fees (see Fees). On presenting the *Fees Receipt* at the Registrar's Office a *Student Identification Card* will be issued. This

completes registration and may be done anytime up to September 9th. To avoid line-ups and long delays the student is urged to complete all aspects of registration considerably before this date.

Students not currently in Grade 13 fill out application forms provided by the *Office of Admissions*. Applications for full-time studies must be returned to the Office of Admission before August 1st. The subsequent procedures are the same as those described above.

Students who wish to be granted credit for courses taken at other Universities (Advanced Standing) should indicate this clearly on their application forms.

Courses, Subjects and Academic Programmes

A **SUBJECT** is a particular discipline such as *English, Chemistry, Philosophy* or *Psychology*. A **COURSE** is a unit in the academic programme such as *Chemistry 150E* (CHM 150E), *History 100* (HIS 100) or *Sociology 101* (SOC 101). The word **PROGRAMME** refers *either* to the collection of courses taken by the individual student in any one year *or* to a particular group of courses that constitute a *Specialist Programme*.

The University of Toronto, Faculty of Arts and Science, St. George Campus Calendar should be referred to for details of the Rules and Regulations of the Faculty. Questions concerning the content and scope of particular courses or subjects, and the requirements for *Specialization* should be made to the relevant *Faculty Advisors* or to the College Registrar.

A student entering the Faculty of Arts and Science has a free choice from among all the courses offered to first year students. Thus he does not need to make an irreversible decision to be in *Arts* or *Science* or to follow a three or a four year course of study. These difficult decisions can now be made at various points of a student's progress through the University in terms of new and developing interests and levels of achievement.

A three-year (15 course) programme, or a four-year (20 course) programme can be made up of courses selected in terms of a wide breadth of interest or relatively narrow interest according to the student's choice. Particular combinations of courses are designed as *Specialist Programmes*. Required courses for a particular specialization are laid down by specific disciplines whose faculty advisers should be consulted for further information. A student is allowed to fulfill the requirements for specialization in *one* or *two* subjects.

It should be noted that the flexibility of choice now available to students does not prevent a student with definite aims and developed interests from following them from the start. It is hoped that even students with determined ideas will take the opportunity offered to explore unfamiliar areas of knowledge.

All new students are urged to seek advice from the Registrar or a Faculty Advisor before final selection of a programme of studies.

Availability of Courses to Other Years

"100 series" courses are available to students in all years. No more than a total of six can be taken in a three-year programme.

Certain "200 series" and "300 series" courses are available to first year students. Such courses are designated by the Roman numeral I, which appears below the course number. Students in second or higher years may choose any course for which they have the pre-requisite(s).

If a student anticipates the possibility of *Specialization* in a particular area in his higher years he should select at least one course in this subject in his first year.

In years other than the first students may wish to choose programmes which will allow them to specialize in a particular discipline; they may combine two areas, e.g. Sociology and Psychology, or they may select a set of courses that will allow them to generalize in an area, e.g. science, humanities or social sciences. Students are urged to consult Faculty Advisors concerning courses that would best fit their aims and which related courses they should take.

Time-Tables

Time tables will be ready well in advance of Registration.

The courses listed in this calendar are subject to revision or withdrawal if necessary. Several courses have been given new numbers. Students may not enrol in and receive credit for the same course twice, even if it has a different number. Any two half courses may be combined to form a full course credit.

Erindale College–Sheridan College Combined Art Education Programme

This is the first co-operative University and Community College programme in Ontario.

A main objective is to provide students with the academic background and the practical training necessary to become teachers of art in Ontario schools. Not all students entering the programme, however, will necessarily enter the teaching profession, and this has been considered in planning course content. The programme can also provide preliminary training for careers in galleries or museums, or can form the basis of a general art education.

Students must meet the admission requirements of Erindale College, which include a complete Grade XIII standing, as well as those of Sheridan College, which include submission in advance of a portfolio, in proof of a satisfactory level of achievement in art studies. They must submit separate applications to both institutions, and also must register in both places, and enroll in the Programme in the Fine Art Office at Erindale College.

There are a limited number of places available for incoming students, so that candidates for entrance are urged to present themselves early in the registration period.

To obtain a B.A. degree at Erindale, 15 credits are required. Students in the Art Education Programme take 5 credits in Studio Art at Sheridan College (FAS courses) and at least 3 credits in Art History at Erindale College (FAH courses). The graduates of the programme who take three-year degrees are eligible to enter the Type B Certificate course at the Faculty of Education of the University of Toronto. To be eligible for the Type A Certificate, the student must complete a four-year B.A., with additional work in Fine Art. (Candidates interested in becoming teachers are urged to consult the Calendar of the Faculty of Education, and to seek advice there, at an early stage of their academic careers.)

Bus transportation between the two colleges is provided. Students should realize that the greater amount of work will be done at Erindale College, and therefore should plan their programmes and accommodations accordingly.

For course descriptions see the listing for Fine Art under Subjects and Courses.

If further information is required please contact the Office of the Registrar, Erindale College.

Specialist and Minor Programmes in Russian and East European Studies

The specialist programme in Russian and East European Studies is designed to provide the student with a broad knowledge of Russian, Soviet and East European affairs.

Programme Requirements

Foreign Language. Each student will complete two consecutive courses of language study in one of the languages of the area.

Core Courses. Students will complete the following four courses:

One course in Slavic literature at the 200 level

HIS 206E	History of Russia, 1000–1974
POL 204	Politics and Government of the U.S.S.R.
GGR 363E	Geography of the Soviet Union

Options. Students must select from the following list, or from additional courses at St. George, a minimum of two courses from one discipline and two other courses. Optional courses must be chosen from at least two disciplines. For purposes of certification students doing a double specialization in this programme and in Slavic Languages and Literatures must choose three optional courses other than SLA courses.

ECO 364EF,	
365ES	Economy of the U.S.S.R.
HIS 310E	The Russian Revolution
POL 329	Marxism
SLA 310	Twentieth Century Russian Literature
SLA 312	Tolstoy and Dostoevsky
SLA 316	Literature and Politics in the Soviet Union
SLA 320	Advanced Russian

A reading course or research project may be designed by the student and faculty advisor to provide an additional credit in any of the participating disciplines.

Minor programmes are also provided.

Faculty Advisor: R. B. Day

Survey Science Programme

In recent years, man has become acutely aware of the environment around him, particularly in connection with such disturbing aspects as pollution, overpopulation and depletion of natural resources. What has been taken for granted for ages is now recognized as a finite environmental system which must be properly managed in order to sustain life and promote orderly development of civilization.

Environmental management embraces many of the physical, biological and social disciplines into which knowledge is divided. One of the key disciplines of the environmental group is survey science, the science of measuring and representing the geometrical and physical features of our environment.

Survey science itself is a multi-discipline body of knowledge which includes such technical subjects as geodesy, photogrammetry, remote sensing and cartography, as well as the procedures that have been traditionally characterized as "surveying". Survey science also includes survey law, particularly the principles of law which pertain to the location and establishment of land boundaries, to land registration, and to the transfer of land ownership.

Survey science is a quantitative discipline, in which the processes of measurement, mathematical modelling, numerical computation, data manipulation and data analysis play essential roles. Accordingly, survey science often employs highly sophisticated instrumentation and procedures which draw heavily upon the basic disciplines of mathematics, physics and computer science.

Survey science relates strongly to other environmental disciplines, such as geology, geophysics and geography, and it is also closely aligned with civil engineering and with urban and regional planning.

Students may enter the Survey Science Programme in the first or second year of undergraduate study. First-year students are eligible to take SUR 200, and are strongly advised to do so if they plan to pursue the complete programme. MAT 135 and PHY 110E or 135E should also be taken in the first year of study.

Details of courses offered will be found under Survey Science in the section on Subjects and Courses.

For further information you should contact the faculty advisor Professor G. Gracie — 828-5299.

Registration and Enrolment

Every student proceeding to a degree in the Faculty of Arts and Science is required to register in one of University College, Victoria College, Trinity College, St. Michael's College, New College, Innis College, Woodsworth College, Erindale College. Information regarding the relation of the Colleges to the University will be found under the heading "The Faculty of Arts and Science and the Colleges". No student can register without being admitted initially by the Office of Admissions.

Registration Procedure

A student who has been admitted to a College as either a regular or special student registers for his programme of studies in Arts and Science through the office of his College Registrar. A full-time Special Student who is not affiliated with a College registers through the Associate Secretary of the Faculty at Sidney Smith Hall. All part-time Special Students register in Woodsworth College.

Students who are registering for the first time or registering again in First Year must bring their letter of admission when registering.

Enrolment in Courses

Enrolment takes place in a department. It is the term used when a student is required to obtain permission from a department to take a specific course or programme. In some instances enrolment is necessary so that laboratory or studio space may be assigned or tutorials arranged.

A student seeking detailed information about a specific course, or programme of studies, should consult the Advisor or Undergraduate Secretary of the Department in which the course or programme is offered. He may not enrol in a course, however, before registering.

A *course* is defined as a unit of study which constitutes one full credit towards a degree.

A *half-course* is a unit of study which constitutes one half-credit towards the degree. It is designated by the suffix F, S, or H (formerly Y).

A student may not enrol in a course or half-course in which he has already obtained a passing grade.

The sum total of all courses and half-courses taken by a student in a given session constitutes his programme.

Change of Course

Students who wish to make a change in their programme after registration must do so through the office of their College Registrar. All requests to change courses other than second-term (S) courses should be made as early in the session as possible but no later than *October 3rd*. Those submitted after that date will be granted only in the most exceptional circumstances. No second-term course may be begun after *January 16th*.

Confirmation of Programme

All full-time students must confirm their choice of courses between October 30th and November 15th by signing their programme in the office of their College Registrar. This procedure is essential in order to ensure accurate records and so that examination arrangements may be made. Third- and Fourth-year students must indicate their choice of degree.

Withdrawal

A student who wishes to withdraw from a course or from his entire programme of studies during the session must do so formally through his College Registrar by the dates listed under Sessional Dates in this calendar. A course or half-course carried beyond these dates will be recorded as a credit or a

discredit on the transcript. Merely ceasing to attend lectures, or informing the instructor, does not constitute official withdrawal.

The College Registrar is unable to authorize any refund of fees until he receives from the student confirmation of his withdrawal. If the student withdraws from all his courses, his registration card must be returned to his College Registrar.

When registering all students are asked to give their Social Insurance Number. For those who do not have one, an application card for a Social Insurance Number may be obtained from a Canadian Post Office or the local office of the Unemployment Insurance Commission (telephone 966-6139).

At registration each student will complete a year card and will receive:

- 1) a University of Toronto registration card and
- 2) a timetable for the courses.

If a registration card is not available at the registration point, a request form will be completed and signed by the registering official. A copy of this form will be given to the student for temporary identification and library privileges. A registration card will be ready for issue at the College in exchange for the student's copy of the request form two weeks after he registers.

Registration Card

The registration card is required for admission to lectures and laboratories, for participation in student activities, for library privileges, and for identification when university examinations are being written. For any student registered in a programme in which the athletic fee is paid, the registration card constitutes evidence of membership in the Men's Athletic Association or the Women's Athletic Association and it entitles the student to all services provided by these Associations as well as the Department of Athletics and Recreation (Men) or the Department of Physical Education (Women). If a student loses his registration card, he must report the loss promptly to his College Registrar and request a replacement.

If a student decides to withdraw from his programme of studies or is authorized to transfer to another college or division, he must return his registration card to his College Registrar to effect his withdrawal or transfer.

The College Registrar is unable to authorize any refund of fees until he receives from the student confirmation of his withdrawal. If the student withdraws from all his courses, his registration card must be returned to his College Registrar.

Requirements for the Degree

Rate of Progress towards the Degree

Five courses are regarded as the normal load for full-time study. However, a student in good standing may register in any number of courses up to six in the Winter Session (not more than six in any one term) unless

- (i) he has an A average in the last five courses attempted, in which case he may register up to seven (not more than seven in any one term), or
- (ii) he was admitted originally to part-time study, in which case he may register in not more than three courses in the Winter Session until such time as at least four courses have been successfully completed with at least three C's.

Students registered in four or more courses in the Winter Session will be regarded as in full-time attendance (students registered in fewer than four courses will be regarded as in part-time attendance).

Note: For purposes of counting "courses by term", each full course, each (F) course and each (S) course counts as one, each (Y) or (H) course counts as a half and each (A) or (B) course counts as two.

Beginning in 1975, registration for degree credit in the Summer Session will be open to all students not under suspension but will be limited to two courses, no more than one and one-half to be undertaken within any six-week period except that students enrolled in University of Toronto courses given at foreign universities may take two courses.

All courses in which a Regular student is registered will be for degree credit unless

- (a) the number of courses being attempted will cause him to exceed the number required for a four-year degree, in which case he will elect at or before the final confirmation of programmes those which are to be designated "extras" on the transcript, or
- (b) the course is a 100-level or 200-level course and the maximum number allowable for degree credit has already been completed, in which case the course will be designated "extra" when recorded on the transcript. Courses may not be nominated as "extras" retroactively.

First Year

A student shall be said to have completed First Year when he has obtained standing in five courses. The courses taken will normally be those designated as being available to First Year students but other courses may be taken with the permission of the department concerned.

A student may not register in Second Year unless he has standing in at least four courses. He may, however, continue as a full-time student.

Second Year

A student shall be said to have completed Second Year when he has obtained standing in ten courses, at least four of which must be 200 or higher-series courses.

A student may not register in Third Year unless he has standing in at least nine courses. He may, however, continue as a full-time student.

Third Year and Requirements for Three-Year Degree

A student shall be said to have completed a Third-Year programme and shall be entitled to receive a Bachelor of Arts or Bachelor of Science degree when he has:

- (a) obtained standing in fifteen courses, no more than six of which may be 100-series courses and at least three of which must be 300- or 400-series courses;

- (b) a final mark of 60% or better in each of at least eight of the fifteen courses. Of these eight at least four must be 200 or higher-series courses;
- (c) for a Bachelor of Science degree, included in the nine or more higher-series courses at least six courses with one or more of the following designations: ANT*, APM, AST, BIO, CHM, CSC, EPS, GGR*, MAT, PHY, PSY, STA, SUR*.

*Only those so designated

A Third Year student who is in good standing and who has completed more than ten but fewer than fourteen courses may enrol in courses for credit towards a four-year Bachelor of Arts or Bachelor of Science degree in addition to those necessary to complete his three-year degree. However, he must be in good standing and have completed at least fourteen courses in order to register in Fourth Year.

A Third Year student should notify his College Registrar no later than November 15th if he wishes to receive his degree. When it is conferred, the designation "Bachelor of Arts (Three-Year)" or "Bachelor of Science (Three-Year)" will appear on his academic record.

Fourth Year and Requirements for a Four-Year Degree

- (a) A student shall be said to have completed Fourth Year and shall be entitled to have the designation "Bachelor of Arts (Four-Year)" or "Bachelor of Science (Four-Year)" entered on his record when he has:
 - (i) qualified for a 15-course degree;
 - (ii) at the first six attempts completed an additional five courses, including at least three 300 or 400 series courses and no more than one 100 series course; (in 1976-77 a Fourth Year student may enrol in one 100 series course only if he has included no more than five such courses for degree credit in the first fifteen courses taken.)
 - (iii) obtained a final mark of 60% or better in each of at least four of the five courses;
 - (iv) for a Bachelor of Science degree included in the twelve (fourteen in 1976-77) or more 200 or higher-series courses at least nine courses from the list given in (c) above.
- (b) For the degree of Bachelor of Commerce a student must have:
 - (i) qualified for a 15 course degree;
 - (ii) obtained a standing in twenty-three courses as prescribed in the notes below and as outlined for the Programme in Commerce and Finance;
 - (iii) obtained a final mark of 60% or better in each of at least four of the last six courses taken and in at least eighteen of the twenty-three courses in his programme.

Notes: The twenty-three courses must include at least seven courses in Commerce, at least seven courses in Economics, and at least four courses in other than Commerce or Economics two or more of which must be taken in second or later years.

The required Commerce courses include Financial Accounting, Managerial Accounting, Informational Systems & Control, and Corporation Finance.

The required Economics courses include Introductory Economics, Microeconomic Theory, Macroeconomic Theory, Statistics, Economic History (or History of Economic Thought) and one advanced course with an analytical emphasis.

The required courses in other than Commerce or Economics must include a course in Mathematics (calculus).

No more than eight (six in 1976-77) 100 series courses can be taken in the four-year programme. In 1976-77, one 100 series course may be taken in Fourth Year only if no more than five have been taken previously.

Item (b) (iii) above applies to those with standing in fewer than five courses before 1975-76. A student who is currently enrolled in the Commerce and Finance programme, or who has successfully completed a minimum of five courses prior to the 1975-76 session, will be required to obtain a final mark of 60% or better in at least seventeen of the twenty-three courses in his degree programme.

Standing in a Course

The following scale of marks and grades will be used for all courses and half-courses in all years.

Marks	Grade
80% – 100%	A
70% – 79%	B
60% – 69%	C
50% – 59%	D
below 50% – Fail	

(The above grades are also used to designate the overall average attained in each year. A final average of B+ (77%–79%) may also be awarded.)

No grade will be awarded in a 100-series course in which standing is obtained by successfully writing a supplemental examination after failure at the first examination. In such cases “Credit” will be recorded on the transcript as well as the final mark.

Marks in two half-courses may not be averaged to produce standing in an equivalent whole course.

The method of arriving at a final mark for each 200- or higher-series course (or half-course) will be decided by the Department offering the course. The final mark in the 100-series courses will normally be made up of a term mark and an examination mark, with the restriction that not less than one-third nor more than two-thirds of the final mark will be based on term work. Final examinations will normally be held in 100-series courses, and requests for exemption of courses from this regulation shall be brought before the Council.

A student may withdraw from the Faculty without academic penalty up to February 15th. However, if he withdraws in the Second Term, credit will be retained for any First Term half-courses completed and failure noted for any First Term half-courses failed. If exceptional circumstances warrant it a student may be permitted, on petition, to withdraw from not more than one course (or two half-courses) of his programme without academic penalty. A student may withdraw without academic penalty and without petition from a First Term half-course before November 15th and from a full course or a half (S or H) course before February 15th. In the summer session this must be done by June 7 for an (F) half-course. The last date to withdraw without academic penalty from a full course or an (H) half-course is June.30; in the summer day session it must be done by July 10.

Aegrotat Consideration

If the ability of a student to complete a course is affected by illness or domestic problems occurring after the final dates listed above, a petition may be made through his College Registrar for consideration by the Faculty. If there are adequate grounds for the petition, the Department concerned will determine the status of the work done by the student and the steps, if any, that he must take in order to complete the course.

Such petitions must be filed with the College Registrar on or before the last day of the relevant final examination period, together with a medical certificate which includes a statement that the candidate was examined at the time illness, or other evidence to support the petition. If necessary, the medical certificate or other supporting evidence may follow within two weeks but the petition must be submitted before the examination period ends.

Letters of Permission

A student who has obtained standing in at least one half-course in the Faculty, and who finds that he will be living, temporarily, at such a distance from any of the three campuses of the University that it will be impossible for him to attend lectures offered by the Faculty, may petition for a “letter of permission” to enrol at another university in one or more courses for “credit” towards the first ten courses of his degree programme.

A student who wishes a “letter of permission” should submit a petition through his College Registrar, before he registers at another university.

Probation, Suspension and Refusal of Further Registration in the Faculty

1. A student will be placed on *academic probation* if
 - (a) he fails two or more courses in any session or
 - (b) at the end of any session (winter or summer) including or subsequent to that in which the fourth course is attempted, he has obtained a grade of C (or higher) in less than 50% of his course attempts since the beginning studies leading to the degree.

Note 1: In each of the above cases the student will be *on probation* for the next five course attempts or until the end of the session in which the fifth subsequent course is attempted. While on probation he must (re-)gain or maintain the required 50% of C's over all course attempts since beginning studies leading to the degree. If the student has failed to (re-)gain or maintain the required 50% of C's or fails two courses he will be *suspended for one year*.

Note 2: If, at the end of any session during which the student is on probation, it becomes impossible for him to (re-)gain or maintain 50% of C's within the prescribed five course attempts since he was placed on probation, he will be suspended *at that time* for one year.

Note 3: A student *on probation* may register in no more than five courses in the winter session; a Third Year student may attempt only those courses necessary for the completion of a three-year degree.
2. A student will be *suspended* from registration in the Faculty *for one calendar year* if, while on academic probation
 - (a) he fails two or more courses
 - (b) he does not (re-)gain or maintain the required 50% of C's within the probationary period.

Note 1: A student *returning from a one-year suspension* may register in no more than five courses in the winter session; a Third Year student may attempt only those courses necessary for the completion of a three-year degree.

Note 2: A student who *returns from a one-year suspension* will be placed on probation for the next five course attempts or until the end of the session in which the fifth is attempted. While on probation *either* he must (re-)gain or maintain the required 50% of C's *or*, if it is impossible to do so within five course attempts, he must obtain a grade of C (or higher) in each course attempt until 50% of C's have been regained. If he fails to do so he will be suspended for three years (see also section 3). Furthermore, if at the end of any session during which he is on probation, he obtains a grade of less than C and thus it becomes impossible for him to (re-)gain 50% of C's within the prescribed five course attempts since returning from the one-year suspension, he will be suspended *at that time* for three years.
3. A student will be *suspended* from the Faculty *for three calendar years* if
 - (a) he fails six courses
 - (b) he fails to satisfy the requirements for a three-year degree in his first twenty attempts
 - (c) while on probation a second time he
 - (i) fails two two or more courses, or
 - (ii) does not (re-)gain or maintain the required 50% of C's
 - (d) after return from a one-year suspension he
 - (i) fails two or more courses during the period of probation (see section 2 Note 2) or

- (ii) fails to (re-)gain or maintain the required 50% of C's within the period of probation or, in the case where this is impossible within five course attempts, fails to obtain a grade of C (or higher) in any course attempted until such time as the 50% requirement has been satisfied.

4. A student who wishes to return to studies in the Faculty after having incurred a three-year suspension may, after the period of suspension has expired, enrol in any one session in two courses which he has not previously attempted. If he obtains an average grade of B in the two courses, and not less than C in either, he will retain credit for these and for all courses in which he was previously successful, and he may re-enrol to complete the remaining courses required for the degree on the condition that he records no failures. A failure in a course after return from a three-year suspension, or failure to obtain the specified level of performance in the first two courses attempted after such a suspension, will result in refusal of further registration in the Faculty.

Note: Instead of taking two courses in one session, a student returning from a three-year suspension may take two courses in separate sessions; in this event, however, Grade B or higher must be obtained in each.

5. A Special Student whose record is unsatisfactory may be refused further registration in the Faculty.

Examinations and Academic Records

Students requiring special consideration with respect to term work or examinations should consult the section of the calendar entitled "Aegrotat Consideration" listed under "Requirements for the Degree". Petitions for aegrotat consideration must be submitted before the end of the examination period.

Attendance and Examinations

A student may not rewrite an examination in a course in which he has already obtained a passing grade.

Students proceeding to the degree are required to attend the courses of instruction and the examinations in all subjects prescribed. A student whose attendance at lectures or laboratories or whose work is deemed by the Council of the Faculty to be unsatisfactory, may have his registration cancelled at any time by the Council.

No candidate will be admitted to examinations unless the Head of his College certifies that he has complied with all the requirements of the College.

Examination Procedures

A provisional timetable will be posted in buildings on the campus approximately two weeks prior to the examination period to permit students to report clashes to the Faculty Office. The final timetable will be posted a few days later, or at least one week prior to the first examination. Every student is responsible for acquiring examination timetable information for himself. Information regarding dates of specific examinations cannot be given by telephone, and no provision can be made for students who may miss examinations because they misread the timetable.

Students in the Faculty of Arts and Science write under examination numbers given to them at the time of the examination. During the examination they will be asked to sign a record of attendance listing their examination number and name and to identify themselves to the presiding officer. For this reason candidates are required to show their registration card when writing examinations.

All candidates are requested to read the Rules for the Conduct of Examination, copies of which may be obtained from the College Registrars or the Secretary of the Faculty.

Winter Session Examinations

Final examinations in fall-term (F) courses are held in December; final examinations in all other courses of the winter session are held in late April and early May.

Summer Session Examinations

Final examinations in summer session courses are in the week following the conclusion of classes in mid-August.

Supplemental Examinations

Students in First Year may write a supplemental examination in August in one failed 100 series course if they have a term mark in that course of at least 60%. Failure in a supplemental examination will not count as a second failure.

Students in Second, Third and Fourth Years and Special Students will not be permitted to write supplemental examinations in 100 series courses and none will be offered in 200, 300, and 400 series courses.

Candidates who are permitted to write supplemental or deferred examinations must submit a completed printed form of application to the Secretary of the Faculty by July 10. After this date an additional fee of one dollar per day to a maximum penalty of \$20.00 must be paid. No application

will be accepted after July 31. They may write these examinations at the places listed below as outside centres. Such candidates must make application for this privilege before July 10 and must pay the special fee.

A student who is granted supplemental privileges after the August examinations must apply by November 15th to write in the following spring examination period. A maximum penalty of \$20.00 must be paid for late application.

No examination will be specially set in any course because of change in course content from a previous session.

Outside Centres

Arrangements may be made to enable eligible candidates to write supplemental examinations in one of the following places: Banff, Calgary, Charlottetown, Edmonton, Fredericton, Halifax, Kapuskasing, Kenora, Kingston, Kirkland Lake, London, Montreal, North Bay, Ottawa, Quebec, Regina, Saskatoon, Sault Ste. Marie, St. John's (Nfld.), Sudbury, Thunder Bay, Vancouver, Whitehorse, Windsor, Winnipeg, and London, England.

Applications for such arrangements must be made not later than November 15th for the April-May examinations, or July 10th for the August examinations. All applications must be accompanied by the required supplemental examination fee and the special fee levied for outside centres.

Candidates for examinations at outside centres must notify the Secretary of the Faculty before April 1st for the winter session examinations, or August 1st for the summer session examinations, if they do *not* wish to write such an examination for which they applied; otherwise the fee will be forfeited.

Degrees

Students are permitted to qualify for only one degree (Bachelor of Arts, Bachelor of Science, or Bachelor of Commerce) by completing a four-year programme of studies.

A student who qualifies for a Bachelor of Arts or Bachelor of Science degree at the end of his Fourth Year will graduate and receive his diploma at that time unless he has already done so at the end of his Third Year. A student who wishes to receive his degree at the end of his Third Year must notify his College Registrar at the time of confirmation of programme early in November.

Transcripts

Copies of a student's transcript of academic record will be issued at his request, subject to reasonable notice and a nominal copying fee. Requests should be submitted in person or by writing to the Secretary, Faculty of Arts and Science, Sidney Smith Hall, 100 St. George Street, Toronto M5S 1A1. (Telephone 928-3388).

There is no charge for transcripts issued within the Faculty or to other faculties or divisions of the University of Toronto. A fee of \$1.50 (including tax) for the first copy plus 50c (including tax) for each additional copy ordered at the same time will be charged to students who wish to receive their own transcript or order copies to be sent to other universities or institutions. Such transcripts will not be issued without prepayment.

Checking of Marks

Courses with faculty final examinations —

After the issue of final results and within six months of the final examination period a student may request from the Faculty Office a reproduction of his final examination for a fee of \$5.00 to cover costs. If he subsequently wishes to have his paper re-read and/or a clerical check of his marks made he must set down his reasons and petition to the Faculty within six months after the final examination period.

Courses with no faculty final examinations —

Within the period specified above a student may request to have a clerical check of his marks made upon payment of a \$5.00 fee to cover costs. If an error is discovered and the mark changed upwards, the fee will be refunded.

Plagiarism

Plagiarism is the act of presenting the ideas or words of another as your own. While it may be argued that few ideas are original, instructors expect students to acknowledge the sources of ideas and expressions that they use in essays. To represent them as self-created is dishonest and academically worthless.

You may quote or paraphrase another writer if he has stated an idea strikingly, as evidence to support your arguments or conclusions, or as a point against which to argue, but such borrowing should be used sparingly and always indicated in a footnote. The aim of scholarship is to develop your own ideas and research and only by trying to develop your own thoughts and arguments will you mature academically.

To provide adequate documentation is not only an indication of academic honesty but also a courtesy enabling the teacher to consult your sources with ease. Failure to do so constitutes plagiarism which is subject to serious academic penalty.

It will also be considered plagiarism if a student submits a term paper written in whole or in part by someone other than himself, or copies the answer or answers of a fellow student in any test, examination, or take-home assignment.

Student Records

Information recorded by the College Registrar at the time of registration is transmitted to the Faculty Office, which issues marks and transcripts. Inaccurate or out-of-date information could cause serious inconvenience, such as a delay in receiving awards, results or transcripts.

A student must report immediately to his College Registrar any changes in the following:

- (a) His programme of studies (courses), including any change in the number or section of a course in which he is enrolled.
- (b) His permanent or home address.
- (c) His temporary address during the session.
- (d) The address to which his results are to be sent.
- (e) His telephone number.
- (f) The name and address of his next of kin.
- (g) His citizenship and status in Canada.
- (h) His marital status.
- (i) His name (legal proof must be presented)
- (j) His social insurance number.

Schedule of Fees

Fees

Prior to registration each student newly admitted to the Faculty and each returning student will be sent a fees form and a schedule of fees stating the academic and incidental fees required, the date due, and the method of payment. Fees vary slightly by college and from year to year, and are subject to change by the Governing Council. The approximate cost for a student in Arts and Science is \$630 annually for tuition and incidental fees such as student organizations, athletic, and health services. Residence fees are separate and generally approximate \$1000 per year for room and board.

For further information concerning fees, students should contact the Fees Department, Office of the Comptroller, 215 Huron Street, Second Floor, University of Toronto, Toronto M5S 1A2. (Telephone 928-2142) Students of the federated colleges (Victoria, Trinity, St. Michael's) should contact their college bursar. Information regarding residences will be sent on request to the residence concerned or to the Office of the Director of Administrative Services, Simcoe Hall, University of Toronto.

Each Special Student enrolled in the Faculty of Arts and Science is required to pay fees at the office of the Comptroller, St. George campus, according to a schedule to be set.

Application Fee

Each applicant who is not in full-time attendance at a Canadian secondary school or who has not previously registered at this University is required to pay an application fee of ten dollars (\$10) when submitting his application form to the Office of Admissions, Simcoe Hall, University of Toronto.

Transcripts

Transcripts of academic record are furnished by the Faculty Office on payment of a fee of one dollar and fifty cents (\$1.5) each. For each additional copy ordered at the same time, the fee is fifty cents (50c).

Other Fees

Study Elsewhere

Each student authorized to participate in the Study Elsewhere programme must pay a fee of one hundred dollars (\$100) to the Comptroller and present his receipt to his College Registrar prior to departure.

Outside Centre Fee

Each student who applies to write an examination outside Toronto must submit with his application a fee of ten dollars (\$10) plus five dollars (\$5) for each additional paper to be written at the same outside centre.

Special Examination Fee

Each student who is granted permission to write a special examination must pay to the Comptroller a fee of ten dollars (\$10).

Supplemental Examination Fee

Each student who is permitted to write a supplemental examination must pay at the time of his application a fee of ten dollars (\$10) for one paper plus five dollars (\$5) for each additional paper.

Fee for Re-checking Marks

A student who requests that his marks be re-checked must submit with his petition a fee of five dollars (\$5), which will be refunded if an error is found.

Penalties

Students are urged to consult frequently the Schedule of Dates printed at the beginning of this Calendar as this sets forth the dates by which certain administrative action is required or penalties may be incurred. These charges are as follows:

Payment by Instalments

Each student who pays his fees in two instalments (September and January) must pay an instalment charge of twelve dollars (\$12).

Late Registration Fee

Each student who registers after the last date for normal registration must pay a late registration fee of ten dollars (\$10); for each day thereafter the fee is an additional one dollar (\$1).

Late Confirmation of Programme

A student who fails to confirm his academic programme in person with his College Registrar in November by the date appointed must pay a late fee as follows:

- If confirming within 7 calendar days — \$10.
- If confirming after 7 calendar days — \$20.

Late Payment of Second Instalment

A student who pays the balance of his fees after the Second Instalment is due incurs a penalty of ten dollars (\$10). Accounts outstanding on March 1st will be subject to a further charge of 1% and monthly thereafter until paid.

Outstanding Fees and Charges

Students who have not paid their fees or residence dues in full or who have outstanding library dues or bookstore accounts by the end of the session will not be permitted further registration in the University, will not have transcripts issued on their behalf, and will not receive their diploma (if in their graduating year) until payment is made.

Deductions from Fees

1. *Scholarships:* A student may apply to his fees any scholarship awarded by the University of Toronto or by Erindale College.
2. *Ontario Student Assistance Programme:* A student may use the loan portion of his OSAP award to pay his first term fees. To do this he must produce his Student Award Statement, enclose it with his fees form, *and submit both, preferably in person, to the Fees Office, Erindale College.* Students who have applied for OSAP and have not received their results of their application may obtain a temporary waiver of fees from the Office of Student Awards, Simcoe Hall, if they lack sufficient personal funds to meet the first instalment of fees.
Payment of the Second Instalment of Fees by OSAP Grant Cheque: Students will not be fined for late payment of fees if the delay in payment is due to the late arrival of the Grant cheque. However, if the Grant is *less* than the second term fees, then the student must pay the difference.

Scholarships and Financial Assistance

Types of Financial Aid offered to full time students:

Scholarships or Prizes: Awarded for academic excellent without reference to financial need. (Note: The J. R. Webster Prize in Spanish, the V. M. Mott History Book Prize, the Alan F. Coventry Memorial Scholarships, and the Harold Sonny Ladoo Book Prize for Creative Writing, are available to both full-time and part-time students.)

Bursaries: Awarded to students who demonstrate both good academic standing and financial need.

Interest-free Loans: Provided to students who have financial need. Loans are repayable according to definite loan agreements.

Erindale College students, as members of the University of Toronto, are eligible for awards offered by the Province of Ontario, the University of Toronto, and Erindale College.

Costs of University Education

In the year 1974-75, total cost to first year students (for the 8-month academic session only) varied from \$2,000 to \$2,500 for students living in a university residence or away from home, and from \$1,700 to \$1,900 for students living at home in the Toronto area. The total amount includes fees and an allowance of approximately \$600 for miscellaneous expenses such as books, supplies, laundry, cleaning, clothing and transportation.

Ontario Student Assistance Programme

The Ontario Student Assistance Programme (OSAP) should be regarded as the primary source of financial assistance for needy Ontario students. Other assistance such as bursary assistance is available only in small amounts to students who do not qualify for Ontario Student Assistance or who have received OSAP assistance which is insufficient to meet their needs.

OSAP is intended to supplement rather than replace private resources. In order to determine the additional funds required, the Province assesses the resources of the family and/or the student. An Ontario Student Award is part loan (interest-free until six months after ceasing full-time study at the university), and part non-repayable grant. In 1974-75 awards have ranged from as little as \$50 to as much as \$2,000 depending upon assessed need. A description of the regulations is contained in a brochure available early in May, 1975 from the Registrar's Office or the Student Aid Office, Erindale College.

Application forms may be obtained early in May, 1975 from the Office of Student Awards, Simcoe Hall, University of Toronto or the Registrar's Office, Erindale College. They must be returned to the Office of Student Awards, Simcoe Hall, University of Toronto, *preferably in person*. *Students are urged to apply early in the summer*. Late applicants may have to wait more than two months for assessment of their applications and receipt of their awards. For the final date of application, please see the 1975-76 OSAP Brochure.

Canada Student Loans Plan

Full details of this Plan are available in a brochure issued each spring by the Government of Canada. Basically the Plan is designed for those students who have resided in Canada for twelve months and demonstrate financial need, but who do not qualify for assistance under the Ontario Student Assistance Programme. The maximum Canada Student Loan is \$1,400 per academic year. The application form for the Ontario Student Awards Programme is also used for the Canada Student Loans Plan.

Application forms and brochures are available from the University of Toronto, Office of Student Awards, and should be submitted, preferably in person, to the Office of Student Awards, Simcoe Hall.

Students who intend to study outside Ontario or abroad and who will not be registered at the University of Toronto should apply through the Ministry of Colleges and Universities, Mowat Block, Queen's Park, Toronto, Ontario.

Students who in Third Year intend to register at the University of Toronto and to study elsewhere should apply to the Office of Student Awards, Simcoe Hall, University of Toronto.

ADMISSION SCHOLARSHIPS

1) University of Toronto Admission Scholarships

Students entering the first year at Erindale College who have achieved high academic standing at their high schools are eligible for a large number of scholarships awarded by the Academic Affairs Committee of the Governing Council of the University of Toronto. The scholarships are listed in the booklet, *University of Toronto Admission Awards, 1975-76*, available at all Secondary Schools in Ontario early in February. *Application is essential.* Application forms available: High School Principal or Guidance Officer; deadline April 25, 1975.

2) Erindale College Admission Scholarships

Students entering the first year at Erindale College who have achieved high academic standing at their high schools are eligible for the following scholarships awarded by the Council of Erindale College. Apply on the University of Toronto Admission Scholarship application form available at your High School; deadline April 25, 1975.

Erindale College Special Admission Scholarships

Awarded from funds allocated by the Academic Affairs Committee of the Governing Council of the University of Toronto. The number, value and terms of award for these scholarships will be determined by the Erindale College Council. Application forms available: High School Principal or Guidance Officer; deadline April 25, 1975.

Erindale College Varsity Fund Admission Scholarships

Three admission scholarships awarded annually. Value: \$350. Application forms available: High School Principal or Guidance Officer; deadline April 25, 1975.

IN-COURSE SCHOLARSHIPS AND AWARDS

1) University of Toronto Scholarships

Students in second, third and fourth year who achieved high academic standing (Grade A) in the preceding year are eligible to apply.

Application forms available: Erindale College Student Aid Office after registration; deadline November 15, 1975.

2) Erindale College Scholarships

Students who achieved high academic standing in either first, second or third year and who will be enrolling in the next year at Erindale College are eligible. All students who achieve high standing will be considered automatically. Application not required.

The Governor General's Silver Medal

Awarded each year to the graduating student with the highest marks. Application not required.

Mississauga University Women's Club Scholarship

Awarded to the full-time female student graduating with the highest standing who will continue her academic studies in Canada in the following year. Value: \$250. Application not required.

Varsity Fund In-Course Scholarships

Three are awarded in each of the second, third and fourth years. Value: \$500. Application not required.

Mississauga University Women's Club Book Prize

Awarded to the woman student enrolled in the first year who obtains the highest standing in the final examinations of that year. Value: \$50. Application not required.

Progressive Conservative Women's Association (Peel South) Award

Awarded to a student entering third year who is specializing in Political Science. Value: \$200. Application not required.

The Mrs. Lois Spigel Book Prize

Gift of Dean I. M. Spigel, in memory of Mrs. Lois Spigel, awarded to a student in second, third or fourth year who is specializing in Social Sciences. Value: \$50. Application not required.

Prize in Hellenistic History

Gift of the Chreston-Macedonian Foundation, awarded to the student with highest standing in a second year Greek and Roman History course. Value: \$150. Application not required.

Prize in Italian

Gift of the Italian Club of Erindale College (1971), awarded to the student who achieves the highest standing in the Introduction to Italian Literature Course and who enrolls in at least two full courses, or their equivalent, in Italian at Erindale College. Value: \$50. Application not required.

Prize in Slavic Literature

Gift of the Chreston-Macedonian Foundation, awarded to the student having the highest standing in a course or courses in Slavic literature. Value: \$150. Application not required.

The J. R. Webster Prize in Spanish

Gift of Professor J. R. Webster, awarded to the student (either full-time or part-time) who having completed Spanish 100 at Erindale College achieves the highest standing in second year in the Spanish Intermediate Grammar and Composition Course. Value: \$100. Application not required.

V. M. Mott History Book Prize

To be awarded to the student, either full-time or part-time, specializing in History, (HIS), who achieves the highest overall average at the end of the third year in at least two full History (HIS) courses taken at Erindale in the current winter session. Value: \$50. Application not required.

The Canadian Labour Congress Book Prize

To be awarded to the full-time student entering Year IV whose programme will include at least two courses in Political Science, and who obtained the highest average in any two Political Science courses in Year III, and an otherwise satisfactory academic standing. Value: \$35. Application not required.

The Alan F. Coventry Memorial Scholarships

Established by friends of the late Professor Alan F. Coventry, two to be awarded.

1. Awarded to the Year II student, either full-time or part-time, who achieves the highest average grade in three Erindale Biology courses.
2. Awarded to the Year III student, either full-time or part-time, who is considered by the Staff in Biology to have made the greatest contribution to biology.

Value: \$300. Application not required.

The Carl Reinhardt Scholarship in Astronomy

Provided by the estate of the late Carl Reinhardt, awarded to a full-time third year student who has i) obtained the highest overall grade A standing and, ii) taken in third year AST 310EF and AST 320ES.

Value: \$300. Application not required.

Surveyors' Scholarships of the Association of Ontario Land Surveyors

Awarded from funds provided by the Association of Ontario Land Surveyors, the number, value, and terms of award for these scholarships will be determined by the Erindale College Council.

Application not required.

The Harold Sonny Ladoo Book Prize for Creative Writing

Established in memory of Harold Sonny Ladoo. To be awarded to either a full-time or part-time student.

Competitors may submit one or more of the following:

- (i) a long poem or a group of short poems,
- (ii) a short story or a group of short stories,
- (iii) a novel or the scheme of a novel accompanied by approximately 15,000 words of the novel itself,
- (iv) a play

No previously published composition will be accepted.

For details consult the Awards Officer.

Value: \$40.

The Canadian Tire Prize in Canadian History

Gift of Mr. Peter O. Montgomery, Canadian Tire Corporation Associate Store, Brampton, awarded to the student, either full-time or part-time, who in his/her third year of study attains the highest grade in any third year Canadian History course.

Value: \$50. Application not required.

Erindale College Special Scholarships

Awarded to students in second, third or fourth year who achieved high academic standing in the preceding year at Erindale College. The number and value of the scholarships will be determined by the Erindale College Council.

Application not required.

3) Other Scholarships and Prizes

Many other scholarships and prizes from a variety of sources are available to Erindale College students. Details of these are displayed on the Notice Board outside the Student Aid Office.

BURSARIES

1) University of Toronto In-Course Bursaries

Students in second, third or fourth year who are in financial need and who have achieved a good academic record (at least B) in the preceding year are eligible to apply.

Application forms available: Erindale College Student Aid Office after registration; deadline November 15, 1975.

2) Erindale College Bursaries

Mississauga University Women's Club Award

Awarded to a mature woman student enrolled in any year, whose studies have been interrupted and who has financial need.

Value: \$300 (May be sub-divided)

Application forms available: Erindale College Student Aid Office after registration, deadline November 1, 1975.

Chreston-Macedonian Bursaries

Gifts of Mr. C. S. Chreston, awarded to students in real financial need who are making satisfactory academic progress.

Value: \$150.

Application forms available: Erindale College Student Aid Office; deadline January 15, 1976.

LOANS

University of Toronto Alumni Association Loan Fund

This fund comes from subscriptions received originally in 1919 and in succeeding years from graduates of the University and is administered by the University of Toronto Alumni Association.

Loans are available to undergraduate students enrolled in a full-time programme at the University, in second and subsequent years. Funds are available for emergency purposes only.

Particulars may be obtained from the Secretary of the Loan Committee, Mrs. B. Connelly, Alumni House, 47 Willcocks Street, Toronto, Ontario M5S 1A1

Professional Faculties

Students enrolled at Erindale College may satisfy the entrance requirements to the Professional Faculties of the University.

Faculty of Dentistry

For entry to the Faculty of Dentistry completion of one year is required. High standing is important for selection. Courses taken should include OHM 150E, PHY 110/135, BIO 100E and two additional courses one of which must be Mathematics. Application forms must be obtained from the Faculty of Dentistry and submitted no later than *December 15*.

Faculty of Education

For Type A certification the academic requirement is an approved four-year degree based on Ontario Grade XIII, or equivalent. Specialization in one field, requires *nine* full courses with a B average; specialization in two fields, requires *fourteen* full courses with a B average, with no fewer than *six* courses in each subject.

For further information students should write to the Registrar of the Faculty of Education, University of Toronto, 371 Bloor Street West, Toronto, Ontario, M5S 2R7.

Faculty of Law

Students must have a minimum of two years of undergraduate studies with high standing. The Faculty does not recommend particular undergraduate courses for those seeking admission. Rather suggests that students treat their previous study as an end in itself and not as a preparation for law school.

Faculty of Medicine

Students may qualify for entry to the Faculty of Medicine (and other Medical Schools). For the Faculty of Medicine, University of Toronto, entry is possible after two years, or after completion of a three or four year degree. The minimum requirements are given below and students are warned that competition for places is intense and therefore they should select a programme of studies in first and second that leads to as many future opportunities as possible.

Courses should include: CHM 150E, CHM 240E (II year), PHY 110, BIO 100E, MAT 130. The admission policies are under review, and students are advised to contact the Faculty of Medicine in the summer to obtain up-to-date information.

Faculty of Pharmacy

For entry to the Faculty of Pharmacy completion of one year of undergraduate study is required with high standing needed for selection. Courses taken should include: CHM 118E/150E, PHY 110, BIO 100E, MAT 130, and one of ECO 100, PSY 100 or SOC 101. Students normally enter second year Pharmacy with advanced standing but may be required to accept as a condition a first year Pharmacy course.

Rehabilitation Medicine

For entry into Rehabilitation Medicine (Physical Therapy or Occupational Therapy, one year of undergraduate study is required. Two sciences, one of which should be Biology; two social sciences, one of which should be Psychology and one other option must be chosen.

Groups of Related Courses

In addition to specializing in the traditional academic disciplines, students may be interested in concentrating on a range of courses which crosses the boundaries of specific disciplines. Some such groupings of courses are presented below. Further combinations to meet particular purposes and interests are of course possible, and students are invited to consult with members of the staff regarding their interests.

Canadian Studies

ANT 217E	Indians of North America
ANT 304ES	Approaches to the Study of Canadian Indian Societies
COM 423	Canadian Business Taxation
ECO 202E	Macro-Economic Theory
ECO 221E	North American Economic History and Development
ECO 261E	Contemporary Canadian Economic Issues
ECO 336E	Canadian Public Finance
ECO 361EF	Labour Economics and Labour Relations
ECO 368EF	Economics of Poverty
ENG 152	Canadian Literature in English
ENG 256	Canadian Fiction
ENG 275E	The Canadian Drama in English in the Twentieth Century
ENG 354	Canadian Poetry
FRE 330	The Literature of French Canada to 1959
FRE 332	The Literature of French Canada from 1960 to the Present
GGR 241E	Urban Canada
GGR 351E	Historical Geography of Northeastern North America
GGR 353EF	Current Canadian Problems in their Historical Setting
GGR 361E	Canada: Contemporary Regional Studies
GGR 471E	Environmental Case Studies
HIS 262	Canada 1663-1970
HIS 331F	Canadian Parties and Politics since 1867
HIS 331E	Issues in Canadian History
HIS 367	Canadian History: The Canadian-American Relationship
HIS 313	Canadian Labour and the Left
HIS 336F	Canadian History: Special Topic
HIS 364	Canada and War, 1867-1967
HIS 368	The Canadian West
INI 202	Canadian Culture and Society
PHL 213S	The University and Canadian Society
POL 100	Introduction to Canadian Politics
SOC 303	Canadian Society

The Common Market

COM 427S	Management Policy and the International Environment
HIS 353E	Modern European Economic History
ECO 328	International Economics and Policy
HIS 100	Modern Europe, 1789-1970
HIS 353F	International Relations, 1870-1960

Communications

CMM 100	Introduction to Communication Theory and Research
CMM 220EF	Communications I
CMM 284F	Communication and Ethics
CMM 330	Stigmatization, Liberation and Communication
LIN 200	Introduction to General Linguistics
PHL 282S	Language and Communication
PHL 283S	The Analysis of Propaganda
PSY 365ES	Social Psychology: Inter-personal Behaviour
SOC 309E	Society of Mass Communication
REL 375E	Communications and Religious Consciousness

Literature in Translation

GLL 200	Greek Drama in Translation
GLL 202S	The Ancient Novel
ITA 270F	Reality, Myth and Death: The Modern Italian Novel
SLA 210	Nineteenth Century Russian Literature
SLA 211	Masterworks of Russian Literature in Translation
SLA 310	Twentieth Century Russian Literature
SLA 312	Tolstoy and Dostoevsky

Environmental Studies

BIO 130E	Man and the Environment
BIO 230E	Ecology
BIO 330E	Plant Ecology
BIO 332E	Freshwater Biology
BIO 333EF	Ecology of Forest Insects
BIO 430E	World Ecosystems
BIO 431E	Advanced Animal Ecology
ECO 260ES	The Economics of Environmental Deterioration
EPS 240S	Environmental Geology
GGR 173E	Man and Environment
GGR 271E	Methods of Environmental Analysis
GGR 373E	Remote Sensing of Environment
GGR 471E	Environmental Case Studies
SOC 328ES	Environmental Sociology

International Relations

ECO 328	International Economics and Policy
HIS 353E	International Relations 1870-1960
POL 208	International Relations
POL 327	Comparative Foreign Policy
POL 328	International Organization

Nineteenth Century Studies

ENG 207	Nineteenth-Century English Literature
ENG 308	Romantic Poetry
ENG 324	Fiction, 1832-1900
ENG 368	Victorian Prose
FRE 364	Prose Fiction from 1800 to 1900
HIS 231	British History in the 19th and 20th Centuries
PHL 347F	Nineteenth Century Philosophy
SLA 210	Nineteenth Century Russian Literature

Third World Studies

ECO 324	Economic Development
ECO 366E	Agriculture and Economic Growth: Theory, History, Policy
ECO 368EF	Economics of Poverty
HIS 101	The Emergence of the Third World
HIS 290	Introduction to Latin American History
HIS 389E	Revolutions in Latin America
HIS 391	Mexico: Independence to Revolution, 1810-1960
SPA 292E	Latin American Civilization and Culture

Urban Studies

GGR 241E	Urban Canada
GGR 340E	Concepts, Methods and Values in Urban Studies
GGR 349E	Advanced Urban Workshop
GGR 441ES	Advanced Topics in Urban Studies
SOC 205	Urban Sociology
SOC 340E	Concepts, Methods and Values in Urban Studies

Medieval Studies

ENG 200	Old English Language and Literature
ENG 312	Chaucer
FAH 102	Medieval Art
FRE 316	Medieval French Language and Literature
GLL 190	Greek and Roman Religion and Mythology
HIS 220	The Shape of Medieval Society
HIS 394E	Survey of Spanish History
ITA 310	Dante's Inferno and Purgatorio
LAT 100	Introductory Latin
SPA 430EF	Medieval Spanish Verse
SPA 450ES	Medieval Spanish Literary Prose

Part-Time Studies

A part-time student is one whose programme consists of no more than 3½ courses during the regular academic session (September to April). During the Summer session both full-time and part-time students may take up to two full courses but only 1½ during any six-week period.

Many part-time students pursue their studies mainly during the evening and summer sessions when the programme is specially designed to meet the needs of those who are unable to attend during the usual day-time hours. However part-time students are free to take any classes during the day which fit their personal schedules. Equally full-time students may take classes during evening and summer sessions.

Application

Application forms for admission as a part-time student may be obtained from the Office of the Registrar, Centre D, North Building, Erindale College or from the Office of Admissions, University of Toronto. Requirements for admission are the same as those for full-time students entering the Faculty of Arts and Science at the University of Toronto, i.e., Ontario Grade XIII or equivalent. If you do not meet this requirement please see below regarding Non-Matriculant students. Last dates for receipt of applications by the Office of Admissions — Summer Evening Session, APRIL 1, 1975, Summer Day Session, MAY 1, 1975, Winter Session, JULY 1, 1975. In exceptional circumstances, later applications will be considered.

Non-Matriculant Students (Mature Students)

An applicant who is at least 21 years of age, but who has never attempted an Ontario Grade 13 programme, or its equivalent, and who has been a resident of Ontario for at least one year, will be considered for admission to the Faculty of Arts and Science upon the completion with high standing of one of the Pre-University courses offered by Woodsworth College. Persons wishing to apply as non-matriculants should consult the Office of Admissions about their eligibility before undertaking one of the Pre-University courses since successful completion of a Pre-University course does not in itself ensure selection.

For further details on admissions, please consult with the Associate Registrar, Erindale College at 828-5244 or the Office of Admissions 928-5490.

Registration

Returning Erindale part-time students will receive the necessary registration forms in the mail well in advance of final registration dates. Those part-time and full-time students affiliated with any other college in the University who wish to take courses at Erindale should apply through their own college registrars.

New Erindale part-time students will receive registration forms in the mail upon confirmation of their admission.

Full-time Erindale students wishing to register for courses during the Summer Session can pick up summer registration forms at their registrar's office at Erindale.

The registration deadlines are as follows:

Last day to register — BY MAIL or IN PERSON

to make sure of first consideration in limited enrollment courses.

— Summer Evening Session — April 15, 1975

— Summer Day Session — June 1, 1975

— Winter Evening Session — September 5, 1975

Last day to register — IN PERSON ONLY

— Summer Evening Session — May 7,8,9 — 9:00 a.m. – 9:00 p.m.

May 10, 9:00 a.m. – 12:00 noon

— Summer Day Session — June 25,26,27 — 9:00 a.m. – 9:00 p.m.

Counselling

The Registrar's Office at Erindale is divided into 4 centres, A,B,C, and D, with Centre D specifically devoted to the interests of part-time students. The office is located in Room 216 of the North Building, telephone, 828-5244 or 828-5344. This office as well as faculty members of the college are freely available for academic and other counselling. New part-time students are particularly urged to consult with the Associate Registrar for Centre D before beginning a programme of studies and all part-time students should feel free to consult the Registrar's office at any time.

Fees

The academic fee for each full course is \$115.00 and \$57.50 for each half-course. In addition, there are small additional fees charged by the Association of Part-time Undergraduate Students (A.P.U.S.). Fees for athletic participation, Health Service and Hart House are optional.

Timetable — Arts and Science

Summer Evening Session, 1975 — May 12 – August 15, 1975

<i>Course</i>	<i>Time</i>	<i>Room</i>	<i>Instructor</i>
COM 100	M&W 7:00-9:30	111	M. Berkowitz
COM 221F	T&R 7:00-9:30	101	TBA
COM 222S	T&R 7:00-9:30	101	TBA
ECO 100	T&R 7:00-9:30	241	M. J. Hare
ENG 108	T&R 7:00-9:30	269	TBA
ENG 218	T&R 7:00-9:30	295	S. Sharkat
EPS 120A	M-R 7:00-10:00	3124	M. Kimberley
FAS 147EH	M-R TBA**	Sheridan College	J. Plough
GER 100	T&R 7:00-9:30	104	P. Harris
GGR 241E	M&W 7:00-9:30	245	H. F. Andrews
GGR 333EF	T&R 7:00-9:30	245	T. F. McIlwraith
HIS 290	T&R 7:00-9:30	240	D. L. Raby
HIS 231	M&W 7:00-9:30	240	W. A. Hayes
HIS 392	T&R 7:00-9:30	270	C. Cannon
MAT 105EH	M&W 7:00-8:30	287	TBA
MAT 130	T&R 7:00-9:30	287	TBA
PHL 202F	T&R 7:00-9:30	269	A. Rosenthal
PHL 213F	M&W 7:00-9:30	270	G. Nagel
PHL 214S	M&W 7:00-9:30	270	G. Nagel
PHL 240F	T&R 7:00-9:30	271	C. Cassin
PHL 241S	T&R 7:00-9:30	271	C. Cassin
POL 101	T&R 7:00-9:30	105	D. V. Smiley
PSY 100(a)	M&W 7:00-9:30	239	T. M. Alloway F.I.M. Craik
PSY 218ES	M&W 7:00-9:30	271	T. M. Alloway
PSY 378EF	T&R 7:00-9:30	285	R. Rinkoff
REL 203	M&W 7:00-9:30	265	M. Lavelle
SOC 101	T&R 7:00-9:30	239	K. Lundy
SOC 201	T&R 7:00-9:30	111	TBA
SOC 205	M&W 7:00-9:30	105	T. F. Brecher

3 digit numbers are in the NORTH BUILDING

4 digit numbers are in the SOUTH BUILDING

R = Thursday

Timetable — Arts and Science
Summer Day Session, 1975 — July 2 – August 15, 1975

<i>Course</i>	<i>Time</i>	<i>Room</i>	<i>Instructor</i>
ANT 101E	9:00-11:00	239	F. J. Melbye
ANT 201	9:00-11:00	241	W. M. Hurley
ANT 230	11:30-1:30	239	F. J. Melbye
ANT 322	May 15- June 30, 1975	Lindreth, New Mexico	
ANT 422	May 15- June 30, 1975	Lindreth, New Mexico	
BIO 340E	9:00-11:00	1079	G. Filion
BIO 352E	9:00-11:00	1096	P. A. Horgen/D. O'Day
ENG 112	9:00-11:00	105	TBA
ENG 308	9:00-11:00	104	TBA
FAS 145EH	1:00-4:00**	Sheridan College	T. Kovalik
FAS 146EH	9:00-12:00**	Sheridan College	T. Crossan
FAS 244EH	9:00-12:00**	Sheridan College	J. Wheeler
FAS 245EH	1:00-4:00**	Sheridan College	M. Fischer
FAS 346EH	9:00-12:00**	Sheridan College	S. Wald
FRE 171	9:00-11:00	110	J. Rault
GGR 131E	11:30-1:30	1157	M. Zide
PSY 100(b)	9:00-11:00	1135	L. Krames
PSY 203EH	11:30-12:30	1135	R. Rosenbaum
PSY 209EH	12:30-1:30	1130	M. Moscovitch
PSY 268E	11:30-1:30	1076	C. Corter
PSY 369EH	11:30-12:30	1104	R. Rinkoff
SOC 305	9:00-11:00	265	T. Fusé
SOC 420H	11:30-12:30	111	TBA
SOC 421H	12:30-1:30	111	TBA

***These courses begin July 7, 1975*

Bachelor of Education Programme
Summer Day Session, 1975 — July 2 – August 15, 1975

<i>Course</i>	<i>Time</i>	<i>Room</i>	<i>Instructor</i>
EDU 204Y	11:00-12:00	245	B. Stewart
EDU 268Y	10:00-11:00	245	L. Stott

3 digit numbers are in the NORTH BUILDING
 4 digit numbers are in the SOUTH BUILDING

Arts and Science
Winter Evening Session, 1975-6 — September 10, 1975 / April 9, 1976

<i>Course</i>	<i>Time</i>	<i>Room</i>	<i>Instructor</i>
ANT 101E	R 7:00-9:00	239	W. Hurley
ANT 206E	T 7:00-9:00	241	TBA
ANT 226	W 7:00-9:00	240	L. L. Sample
ANT 228EF	TBA	TBA	TBA
ANT 304EF	M 7:00-9:00	232	TBA
ANT 320EF	TBA	TBA	TBA
ANT 334E	W 7:00-9:00	234	F. J. Melbye
BIO 100	S 9:00-12:00	2080	Biology Staff
BIO 435EF	T 7:00-10:00	3125	G. Thaler
COM 100	W 7:00-9:00	245	TBA
COM 221F	T 7:00-9:00	245	TBA
COM 222S	T 7:00-9:00	245	TBA
CIM 320	T 7:00-9:00	240	TBA
CMM 284F	M 7:00-9:00	269	A. Stein
CMM 330E	M 5:00-7:00	265	TBA
CSC 108F	T 7:00-9:00	3093	TBA
CSC 118S	T 7:00-9:00	3093	TBA
ECO 100	W 7:00-9:30	241	M. J. Hare
ECO 202	M 7:00-9:30	240	TBA
ENG 108	M 7:00-9:30	111	TBA
ENG 152	R 7:00-9:00	111	TBA
ENG 212	W 7:00-9:00	111	J. Astington
ENG 312	T 7:00-9:00	111	TBA
FAH 101	T 7:00-9:00	207	T. Elliott
FRE 271	M 7:00-9:00	234	H. Weinberg
FRE 272	R 5:00-7:00	105	TBA
GER 435	W 5:00-7:00	232	C. Saas
GGR 213E	R 7:00-9:00	1157	D. S. Munro
GGR 250E	W 7:00-9:00	1157	H. Andrews
GGR 331	T 7:00-9:00	265	D. Putnam
HIS 100	M 7:00-9:00	241	M. Dafoe
HIS 271	W 7:00-9:00	239	C. Cannon
HIS 330S	M 7:00-9:00	239	G. Brandt
HIS 485	T 7:00-9:00	269	C. Rubincam
INE 201	W 7:00-9:00	270	P. Harris
ITA 271S	T 7:00-9:00	292	L. McCormick
ITA 272F	T 7:00-9:00	270	L. McCormick
MAT 105EF	T 7:00-9:00	2080	TBA
MAT 115EH	W 7:00-9:00	2080	TBA
MAT 105EF	W 7:00-9:00	2080	TBA
MAT 115ES	W 7:00-9:00	2080	TBA
MAT 130,134,135	T 7:00-9:00	2080	TBA
PHL 100	T 7:00-9:00	101	K. Henwood
PHL 347EF	R 7:00-9:00	241	W. J. Huggett
PHL 348ES	R 7:00-9:00	241	W. J. Huggett
POL 100	W 7:00-9:00	207	TBA

Arts and Science

Winter Evening Session, 1975-76 — September 10, 1975 – April 9, 1976

<i>Course</i>	<i>Time</i>	<i>Room</i>	<i>Instructor</i>
POL 204	T 7:00-9:00	1130	R. B. Day
POL 214	W 7:00-9:00	3124	R. B. Day
PSY 100	T 7:00-9:00	2082	F.I.M. Craik/ T. M. Alloway
PSY 200EF	M 7:00-9:00	1135	R. Fisher
PSY 203ES	M 7:00-9:00	1135	P. Pliner
PSY 213EF	T 7:00-9:00	1148	L. Krames
PSY 214ES	T 7:00-9:00	1148	F.I.M. Craik
PSY 218EF	W 7:00-9:00	1135	T. M. Alloway
PSY 268E	T 7:00-9:00	1104	R. Rinkoff
PSY 363ES	W 7:00-9:00	1135	L. Krames
REL 100	W 7:00-9:00	265	S. A. Nigosian
REL 362	M 7:00-9:00	101	L. J. Elmer
REL 375	T 7:00-9:00	234	L. Schmidt
SOC 101	T 7:00-9:00	239	M. H. Cooper
SOC 202	T 7:00-9:00	1158	J. Kervin
SOC 213	W 7:00-9:00	1158	TBA
SOC 214	T 7:00-9:00	1143	M. Spencer/R. Rosen
SOC 306S	W 7:00-9:00	1143	J. Hagan
SOC 309	T 5:00-7:00	1157	TBA
SOC 311	R 7:00-9:00	1158	TBA
SOC 313	M 4:00-6:00	1157	P. Lorion
SOC 324	M 5:00-7:00	1158	TBA
SOC 329ES	T 5:00-7:00	TBA	TBA
SPA 100	R 7:00-9:00	110	TBA
SPA 220	M 7:00-9:00	277	TBA
SPA 292	T 7:00-9:00	110	E. Neglia
STA 202EF	W 7:00-9:00	2074	TBA
STA 212ES	W 7:00-9:00	2074	TBA
SUR 230E	T 7:00-9:00	1142	R. C. Gunn
SUR 240ES	R 7:00-9:00	1142	G. Gracie
SUR 310E	M 7:00-9:00	1148	D. Lambden
SUR 332ES	W 7:00-9:00	1148	D. Lambden

3 digit numbers are in the NORTH BUILDING

4 digit numbers are in the SOUTH BUILDING

Bachelor of Education Programme
Winter Evening Session, 1975-76

<i>Course</i>	<i>Time</i>	<i>Room</i>	<i>Instructor</i>
EDU 110S	7:15-9:15	TBA	TBA
EDU 127F	5:00-7:00	TBA	TBA
EDU 204S	5:00-7:00	TBA	TBA
EDU 206F	7:15-9:15	TBA	TBA

Timetable

Winter Evening Session classes usually meet once a week for the academic year usually from 7:00 p.m. to 9:00 p.m. Dates for these courses correspond to those for the academic session 1975-76 as set out in this calendar. The last day for registration is September 5, 1975 for returning students. Last day for applications — new students — is July 1, 1975.

Note: Evening and Summer Classes given by Woodsworth College are now listed in the St. George Campus calendar.

Please refer to page 5 for IMPORTANT SESSIONAL DATES which are of the utmost importance in a student's academic year.

All regulations applying to regular full-time students as given in the calendar — except number of courses — apply equally to part-time students.

Centres

The registrarial and academic counselling services at Erindale are organized around three centres, one located in the North Building and two in the South Building. The purpose of the Centre is to provide closer contact between administrators, faculty and students than would be possible with a centralized registrar's office to serve nearly 3000 students.

Each Centre is administered by an Associate Dean and a Registrar and has associated it with a number of disciplines. Initially you will be assigned to a Centre on the basis of your academic interest, but you are free to change affiliation if you so wish.

Although the Centres are new, we hope that they will provide a number of possibilities for improving the quality of life at Erindale that would not occur without them. For example, this year the Athletic and Recreation Department is instituting an intramural league whereby Centres will compete in a number of sports. We also hope that each centre will become the focus for a number of other recreational and cultural activities and academic interests. If there are things missing from the life at Erindale that you would like to see initiated, get together with your registrar or dean and let him know.

The Centres are organized as follows:

NORTH BUILDING

HUMANITIES

Centre A (Room 216)

Anthropology
Classics
Drama
English
Fine Art
French
German
History
Italian
Linguistics
Music
Philosophy
Religious Studies
Slavic Studies
Spanish

SCIENCES

Centre B (Room 2037)

Astronomy
Biology
Chemistry
Computer Science
Earth and
Planetary Science
Mathematics
Physics
Psychology
Statistics

SOUTH BUILDING

SOCIAL SCIENCES

Centre C (Room 2122)

Commerce
Communications
Economics
Geography
Political Science
Sociology
Survey Science

Centre D

Part-time students
North Building

Abbreviations

Subject Abbreviations

ANT	Anthropology	GRH	Greek & Roman History (See Classics)
APM	Applied Mathematics (See Mathematics)	HIS	History
AST	Astronomy	INE	College Subject (Erindale)
BIO	Biology (Botany, Zoology and Microbiology)	INI	Interdisciplinary (Innis College)
CHM	Chemistry	ITA	Italian
CMM	Communications	LIN	Linguistics
COM	Commerce	LTR	Literature in Translation
CSC	Computer Science	MAT	Mathematics
DRA	Drama	MUS	Music
ECO	Economics	PHL	Philosophy
ENG	English	PHY	Physics
EPS	Earth & Planetary Sciences (Geology & Geophysics)	POL	Political Science
FAH	Fine Art History	PSY	Psychology
FAS	Fine Art Studio	REL	Religious Studies
FRE	French	SLA	Slavic Languages & Literature (Russian)
GER	German	SOC	Sociology
GGR	Geography	SPA	Spanish
GLL	Greek & Latin Literature (See Classics)	STA	Statistics
		SUR	Survey Science

Letter Abbreviations

A	A whole course offered in one term
E	Course given only at Erindale
F	Half course given in the First (Fall) Term only
H	Half course taught throughout the year
L	Lectures
MTWRF	Days of the week
N	To be announced
P	Practical or laboratory hours
P.I.	Permission of Instructor
S	Half course given in the Second (Spring) Term only
S	Seminar hours
T	Tutorial hours
Y	Half course which must be taken throughout both terms
/	means "or"
&(,)	means "and"
(I)	may be taken by first year students
NCO	Not currently offered
SDS	Summer Day Session
SES	Summer Evening Session
WDS	Winter Day Session
WES	Winter Evening Session

Timetable Hours

Example — 2L,MW2; 1T,R2; 3P,F2-5

This means there are two lectures on Monday and Wednesday at 2 p.m., one tutorial hour on Thursday at 2 p.m. and three practical or laboratory hours on Friday from 2-5.

Only winter session day or evening times are shown.

Subjects and Courses

ANTHROPOLOGY

Faculty Advisor: Professor A. Mohr

Anthropology is the study of human biology and culture and the interaction between the two. *Physical Anthropology* focuses on the evolution of man and his nearest primate relatives, as revealed by fossil remains, and on the constitution, physiology and variation of living populations. *Cultural Anthropology* is the study of the way of life of peoples throughout the world: their technologies, economies, societies, languages, and value systems; the functional interrelationships of these; and the relationship between culture and environment. Physical remains of the activities of populations no longer extant (e.g., habitations, tools, food remains) are investigated by archaeological techniques to reconstruct the cultures of the past and to trace their development from earliest times. Conclusions are drawn about the interaction of cultural and physical processes.

The Anthropology programme offers the student the general background necessary for the advanced training required for professional positions. It is the special concern of the faculty to introduce students to research methods of physical and cultural anthropology and to involve them in the research programmes of the department. Students planning an anthropology concentration should consult faculty members for advice.

Anthropologists are employed as faculty in universities and colleges, as researchers in museums, and by government. For additional information see Anthropology as a Career by Wm. C. Sturtevant, available at the Erindale College Library.

For a minor in Anthropology 6 courses are required including ANT 101E, ANT 206E, ANT 226, and ANT 230E. A specialist programme requires 3 additional courses, including ANT 399E and one of the following: ANT 207EF, ANT 231EH, ANT 228EF, or ANT 322E.

The following Anthropology courses are considered as Science courses: ANT 230E, 231EH, 232E, 322E, 334E, 336EF, 338E, 339EF, 422E, and 434EF.

ANT 101E Introduction to Anthropology 2L, W7-9/R2-4; 2T,N

A survey of the biological and cultural aspects of man and his behaviour: mankind's evolutionary development and present variation; concept of culture, its various aspects and processes; origin, development and differentiation of cultures from the archaeological record. *A. Mohr*

SDS (x) SES () WDS (x) WES (x) NCO ()

ANT 201 North American Archaeology 2L,N

(I)

A survey of culture history from the first appearance of man in North America until the coming of the Europeans. Selected readings provide the broad outline; lectures will discuss methods of analysis and offer detailed summaries of the evidence of selected sites and their interpretation.

SDS (x) SES () WDS (x) WES () NCO ()

ANT 206E Social and Political Organization 2L,MW1/T7-9

(I)

A general survey emphasizing non-western peoples. *R. M. Vanderburgh*

SDS () SES () WDS (x) WES (x) NCO ()

- ANT 207EF Folklore 2L,N; 1P,N**
 (I) Lectures on ethnographic field techniques; survey description and comparison of types and functions of the "oral literature" of various culture areas. Student project: field work in modern folklore. *L. L. Sample*
 SDS () SES () WDS (x) WES () NCO ()
- ANT 209E Religion in Culture 2L,M7-9; 1T,N**
 (I) An anthropological view of religious behaviour with emphasis on the religions of non-western peoples. *R. M. Vanderburgh*
 SDS () SES () WDS (x) WES () NCO ()
- ANT 210E The Anthropology of Art 2P,W10-12**
 (I) Comparative approaches to art and aesthetics in world cultures and the meaning and function of art in specific cultural contexts. *L. Reinhardt*
 SDS () SES () WDS (x) WES () NCO ()
- ANT 211EF African Culture History 2L**
 (I) A survey of African culture history from the dawn of pre-history through the colonial era. Consideration of variety in adaptational forms and development; agricultural origins, state systems, reactions to colonialism. *L. Reinhardt*
 SDS () SES () WDS () WES () NCO (x)
- AND 212ES Traditional and Contemporary African Cultures 2L**
 (I) Survey of traditional African cultures and institutions, and the changes involved in current movement toward industrialization. *L. Reinhardt*
Pre-requisite: ANT 211EF or P.I.
 SDS () SES () WDS () WES () NCO (x)
- ANT 214E Civilizations of Latin America 2L,MW9**
 (I) Development and characteristics of complex cultures of Central and South America.
 SDS () SES () WDS () WES () NCO (x)
- ANT215ES Peoples of the Far East 2L,N**
 (I) Description of traditional cultures of China, Korea, Japan and Siberia. Complex cultural interrelationships in this area (diffusion, assimilation, and cultural distinctiveness.) *L. L. Sample*
 SDS () SES () WDS (x) WES () NCO ()
- ANT 216E Peoples of Southeast Asia and Oceania 2L**
 (I) Survey of the cultures of Southeast Asia; peopling of the Pacific Islands and description of historic cultures of Oceania.
 SDS () SES () WDS () WES () NCO (x)
- ANT 217E Indians of North America 2L,1P**
 (I) Survey of native cultures and discussion of the role of environmental and historical factors. *A. Mohr*
 SDS () SES () WDS () WES () NCO (x)

- ANT 221ES Archaeological Laboratory Analysis 1L,N; 2P,N**
(I) Analysis and description of archaeological material. *A. Mohr*
Pre-requisite: ANT 228EF and P.I.
 SDS () SES () WDS (x) WES () NCO ()
- ANT 226 Old World Prehistory 2L,W7-9**
(I) Earliest evidence for human culture; development differentiation and diffusion of cultures in the Old World through the last 2,000,000 years. Interpretation of man's cultural adaptations from material remains of that behaviour. *L. L. Sample*
 SDS () SES () WDS (x) WES (x) NCO ()
- ANT 228EF Archaeological Field Methods 2P,N**
 Instruction in archaeological field techniques from August 18 to 29, through excavation of a prehistoric site located near Erindale College and by laboratory instruction. *A. Mohr*
Pre-requisite: P.I.
 SDS (x) SES () WDS () WES () NCO ()
- ANT 230E Physical Anthropology 2L,TR10-12/T7-9; 1T,N**
(I) A survey of the field of physical anthropology. Topics will include human evolution and paleontology, skeletal biology, human genetics and variation, human growth, primatology and human adaptation. *B. A. Sigmon, F. J. Melbye*
 SDS (x) SES () WDS (x) WES () NCO ()
- ANT 231EH Laboratory Methods in Physical Anthropology 2P,T2-5**
(I) Recommended for those who may specialize in anthropology. The student will be guided in basic laboratory procedures on specific topics as they are discussed in the survey course. *B. A. Sigmon, F. J. Melbye*
Co-requisite: ANT 230E
 SDS () SES () WDS (x) WES () NCO ()
- ANT 232E Human Origins 2L,TR1; 1P,T9**
 A survey of human palaeontology and the evolutionary stages through which man passed in becoming HOMO SAPIENS. *B. A. Sigmon*
Pre-requisite: ANT 100E
 SDS () SES () WDS (x) WES () NCO ()
- ANT 304ES Approaches to the Study of Canadian Indian Societies 2T,N**
 A seminar course examining the acculturative situation. *R. M. Vanderburgh*
Pre-requisite: ANT 206E or ANT 217E and P.I.
 SDS () SES () WDS (x) WES (x) NCO ()
- ANT 305E Technology, Society and Culture 3P,N**
 The role of technology in social and cultural change and adaptation, including an introduction to basic techniques and their historical development. *L. Reinhardt*
 SDS () SES () WDS (x) WES () NCO ()

- ANT 320EF Advanced Archaeological Field Methods P,N**
 Instruction in archaeological field techniques, laboratory preparation, supervision of field and laboratory work. (Conducted concurrently with ANT 228EF). *A. Mohr*
Pre-requisite: ANT 228EF and P.I.
 SDS (x) SES () WDS () WES () NCO ()
- ANT 321ES Advanced Archaeological Analysis P,N**
 Analysis of archaeological material and report preparation. *A. Mohr*
Pre-requisites: ANT 221ES and P.I.
 SDS () SES () WDS (x) WES () NCO ()
- ANT 322E Special Course in Archaeological Field Methods P,N**
 (I) Field sessions from about May 15 to June 30, 1975. Instruction in archaeological field methods. The course is held in an area which provides experience with types of archaeological phenomena not available for ANT 228EF. In 1975 the session will be in the region of Lindreth, New Mexico. *L. L. Sample, A. Mohr*
Pre-requisite: P.I.
 SDS () SES () WDS (x) WES () NCO ()
- ANT 324E Archaeological Interpretation 2T**
 A survey of methods and ideas about the reconstruction of the past from the archaeological record including subsistence, population, social organization, religion, settlement plan and organization, etc. *A. Mohr*
Pre-requisite: ANT 228EF, 221ES/ANT 201/ANT 226 and P.I.
 SDS () SES () WDS () WES () NCO (x)
- ANT 334E Skeletal Biology of Prehistoric Peoples 2L, ¼7-9**
 Includes the method and technique of recovering, preserving, recording and analysing skeletal remains. The human skeleton will be studied in detail, and practical experience will be offered in the analysis of a skeletal population. *F. J. Melbye*
Pre-requisite: ANT 230E or ANT 233E and P.I.
 SDS () SES () WDS () WES (x) NCO ()
- ANT 336EF Human Heredity, Evolution and Variation 2L,M1-4; 2P,N**
 The principles of human population genetics are the central theme of the course. Against this background topics relating to human evolution and human diversity will be discussed. *F. J. Melbye*
Pre-requisite: ANT 230E (or ANT 233E (1972-73)) or P.I.
 SDS () SES () WDS (x) WES () NCO ()
- ANT 338E Primate Biology 3P,N**
 An introduction to the biology of non-human primates, including the study of soft and skeletal anatomy of representatives of different taxa of extant primates. *B. A. Sigmon*
Pre-requisite: ANT 233E (1972-73) or P.I.
 SDS () SES () WDS () WES () NCO (x)

- ANT 339EF Human Adaptability** 3L,N
 A survey of the nature and range of biological variation in modern man.
B. A. Sigmon
Pre-requisite: ANT 101E, ANT 233E (1972-73), ANT 230E or P.I.
 SDS () SES () WDS (x) WES () NCO ()
- ANT 397EH Independent Study** T,N
ANT 397EF Supervised reading on selected anthropological topics.
AND 397ES *Pre-requisite:* P.I.
 SDS () SES () WDS (x) WES () NCO ()
- ANT 398E Independent Reading** T,N
 Supervised study of selected anthropological topics.
Pre-requisite: P.I.
 SDS () SES () WDS (x) WES () NCO ()
- ANT 399E Independent Research** T,N
 Supervised research in anthropology.
Pre-requisite: P.I.
 SDS () SES () WDS (x) WES () NCO ()
- ANT 422E Special Projects in Archaeological Field Research**
 Field session from about May 15 to June 30, 1975. Held in conjunction with ANT 322E. Advanced students will be supervised in individual investigation of special problems in the archaeology of the area. In 1975 the session will be in the region of Lindreth, New Mexico. *L. L. Sample, A. Mohr*
Pre-requisites: ANT 320E and 321ES or ANT 322E and P.I. or P.I.
 SDS (x) SES () WDS (x) WES () NCO ()
- ANT 433ES Palaeodemography** 3P,N
 The study of prehistoric human population. The course will explore aspects of mortality and life span in relation to age and sex ratios of human populations. *F.J. Melbye*
Pre-requisite: ANT 334E
 SDS () SES () WDS (x) WES () NCO ()
- ANT 434EF Paleopathology** 3P,M1-4
 The study of diseases of ancient populations, and the detection and interpretation of human skeletal pathology. Four facets are: 1) the comparison of populations, 2) the influence of disease on culture, 3) the temporal and geographical distribution of diseases, 4) clinical uses of the data. *F.J. Melbye*
Pre-requisite: ANT 334E and P.I.
 SDS () SES () WDS (x) WES () NCO ()
- ANT 480 Graduate Course in Anthropology**
ANT 481F Up to the equivalent of one graduate course may be taken, using one of these numbers.
ANT 482S *Pre-requisite:* permission of department
 SDS () SES () WDS (x) WES () NCO ()

ANT 490E Seminar in Anthropological Theory and Method
Pre-requisite: P.I.
SDS () SES () WDS (x) WES () NCO ()

ANT 499E Advanced Independent Research
For students whose original research is leading toward a publishable report.
Pre-requisite: P.I.
SDS () SES () WDS (x) WES () NCO ()

APPLIED MATHEMATICS

(See Mathematics)

APM 251E Applied Mathematics I **2L, TR12; 1T, N**
Introduction to dynamical systems: Newtonian physics, Lagrangian dynamics, linear networks, vibrating strings, linear systems in finite dimensional vector spaces: similarity, orthogonality, eigenvectors, decomposition of spaces. Introduction to infinite dimensional spaces: orthogonality, eigenvectors, Fourier series. Some numerical methods. Some experience in an experimental science is desirable.
Exclusion: MAT 244F, 244EF, 214EF, 219ES, 235
Pre-requisite: MAT 135 (C or better) or MAT 139E
Co-requisite: MAT 239E
SDS () SES () WDS (x) WES () NCO ()

APM 351E Applied Mathematics II **2L, TR12; 1T, N**
Partial differential equations of applied mathematics, mathematical models of physical phenomena, basic methodology.
Pre-requisite: APM 251E (C or better)
SDS () SES () WDS (x) WES () NCO ()

ASTRONOMY

Faculty Advisors: Professors J. R. Percy and R. Racine

Astronomy, the "Queen of Sciences," is wide-ranging in its content and in its implications. It embraces such topics as the origin and evolution of the planets, stars, galaxies and universe; the origin of life on earth and elsewhere; the behaviour of matter in varied environments and, in general, the influence of our ideas of the universe on man's thinking down through the ages. Because of its breadth, it has always formed a valuable part of a general education.

AST 100, which deals in a systematic way with many facets of astronomy, is recommended for any student who is interested in astronomy. Although no science or mathematics background is required, the course is sufficiently flexible to appeal to both science and non-science students. Films, slides, demonstrations, trips to the observatory and planetarium, and evening sessions form an important part of the course.

At a more advanced level, AST 310EF and AST 320ES may be taken together or separately. They are intended for students with a serious interest in science (mathematics, physics, astronomy, space science or earth and planetary sciences), but require no previous introduction to astronomy.

Students who wish to specialize in Astronomy and Astrophysics should consult the Astronomy Faculty Advisors at Erindale.

- AST 100E An Introduction to Astronomy 2L,MR4; 1T,N**
 An account of the nature, origin and evolution of the sun and planets, the stars, the galaxies and the universe. No special science or mathematics background is required for this course. *R. Racine*
 SDS () SES () WDS (x) WES () NCO ()
- AST 310EF Solar System Astrophysics 2L,F11-1**
 The physical nature of the sun, planets, satellites and other constituents of the solar system. Their motion, structure, origin and evolution. *J. R. Percy*
Co-requisite: At least one 300-level Physics course/P.I.
 SDS () SES () WDS (x) WES () NCO ()
- AST 320ES Stellar and Galactic Astrophysics 2L,F11-1**
 The structure, origin and evolution of the sun, stars, galaxies and universe. Introduction to relativity and cosmology. *J. R. Percy*
Co-requisite: At least one 300-level Physics course/P.I.
 SDS () SES () WDS (x) WES () NCO ()
- AST 425H Research Topic in Astronomy**
 Consists of a research report by the student in consultation with an individual staff member in the department. Students must enrol with the faculty advisor of the department on the Erindale Campus.
Co-requisite: AST 420
 SDS () SES () WDS (x) WES () NCO ()

BIOLOGY

Faculty Advisors: Professors P. W. Ball (Botany), P. J. Pointing (Zoology) and A. Guha (Microbiology)

Biology is the science of living organisms — their kinds and relationships, origins and evolution, structure and development, their functions and mutual relationships in the environments in which they occur. Biology relates to such major human problems as population, conservation and pollution. Studies of the interaction of plants, animals and environment show how famine and disease follow the unwise use of habitat and how pollution aggravates these problems. A study of Biology is a key to the solution of many of these world problems.

Botanists, microbiologists and zoologists at Erindale cooperate closely in organizing courses and programmes in *Biology* which stress the relationships of plants and animals in terms of form, function, environment and microstructure, from the ecosystem, whole plant or animal down to the molecular level.

Botany is concerned with plants, their structure, functions and basic relationships to the environment. The food we eat, the air we breathe, the drugs that heal us, all are ultimately tied to the relation of plants to the natural environment. Plants are the basis of vast and complicated food chains in the oceans, lakes and rivers as well as terrestrial ecosystems. Plants may be studied from many points of view such as their identification and relationships (Taxonomy), distribution (Biogeography), function and development (Physiology), interrelationships with the environment (Ecology), fine structure (Cell Biology), form (Morphology) and heredity (Cytology and Genetics).

Zoology is the science concerned with the study of the structure, functioning and interrelationships of animals. The general field of zoology is divided into a large number of special areas of study and research. Zoology may be divided on the basis of classification of animals, for example,

protozoology, entomology, mammalogy, and ichthyology. Another way is to divide it by levels of organization and/or methods of study, such as molecular biology, cell biology, morphology, physiology, genetics, ethology, and population biology.

Historically, zoology was largely an observational science, but now has become more experimental and theoretical and depends in its research on the modern principles of mathematics and the physical sciences. The main theoretical contributions of zoologists have been in the understanding of life in terms of physical and chemical mechanisms, and the theory of organic evolution. Much of the research done in medicine depends on discoveries made with other animals and applied to man. Many agricultural fields, such as veterinary medicine and economic entomology, also depend on zoological research.

Microbiology is the study of minute living forms that can be seen as individuals only with the microscope and is concerned with small *plant* forms (algae, molds, yeasts and bacteria), single-celled *animals* (protozoa) and viruses. Microbiology is not only considered largely an applied field concerned with health or economic welfare, but with the recent development of Molecular Biology, Microbiology has also been drawn to the centre of the biological stage. It deals with bacteriology, virology, immunology, applied microbiology and molecular biology.

Careers in biology are in research, in teaching at all levels, and in government and industry. Professional careers in biology require specialization at the undergraduate level, and usually an advanced degree. Students should bear this in mind when planning programmes. Students who intend to become high-school biology teachers are urged to arrange programmes to meet the requirements of the High School Assistant's Certificate, Type A, Ontario Department of Education.

Staff will assist students in organizing an appropriate group of courses according to their interests or a specialized programme in biology.

SUGGESTED PROGRAMMES IN BIOLOGY

The programme in Arts and Science provides a great deal of flexibility in students' subject selections. In fact, many students, when faced with the variety of courses, have difficulty in selecting an appropriate sequence. To assist students in making choices, the biology staff members, collectively, have devised several sample programmes which will serve as guides. These are suggested groupings of subjects which are recommended but should not be considered as the only streams, nor as being inflexible. A programme in Animal Behaviour has been established jointly by Psychology and Biology; students interested in this programme should consult the psychology section of this calendar for a listing of courses.

<i>Year</i>	<i>General Biology</i>	<i>Ecology</i>	<i>Cell Biology</i>	<i>Physiology</i>
I	BIO 100E	CHM 150	BIO 100E	BIO 100E
	CHM 150	BIO 100E	CHM 150E	CHM 150
	3 Options	BIO 235E	MAT 130	MAT 130
	(one recommended from Humanities)	2 Options	PHY 110E	PHY 110E
			1½ Options	1½ Options
II		BIO 230E	BIO 230E	BIO 241E
		BIO 250E	BIO 241E	BIO 250E <i>or</i>
	BIO 230E*	BIO 251E	BIO 340	251E
	BIO 340E	BIO 360E	CHM 270EF	BIO 352
	BIO 241E	1 Option	1½ Options	CHM 270EF
	BIO 250E			1½ Options
	BIO 251E			

Year	General Biology	Ecology	Cell Biology	Physiology
III	BIO 352E BIO 320E BIO 321E BIO 370E	BIO 340E BIO 241E BIO 320 <i>or</i> 321E BIO 330E 1 Option	BIO 352 BIO 250E <i>or</i> 251E BIO 370E BIO 320E <i>or</i> 321E 1 Option	CHM 240 BIO 340E BIO 360E BIO 320E <i>or</i> 321E 1 Option
IV (1) (2)	5 Options	5 Options such as: BIO 430E BIO 431E BIO 433ES BIO 322E <i>and</i> 323E etc.	5 Options such as: BIO 441E BIO 470E etc.	5 Options such as: BIO 322E, 323E BIO 324E, BIO 422ES, BIO 424ES, 441EF

*Choose a total of 6 Biology courses and 4 options during years II and III.

(1) A minimum of 12 Biology courses in a four-year degree is suggested for a well-rounded education.

(2) A fourth year would consist primarily of biology options.

BIO 100E The Study of Life 2L,TR9/11/1; 3P,N

Organized around three major abstract concepts: Time (Evolutionary Processes and Products), Energy (Its procurement and Utilization by Living Organisms), and Information (The Organization of Living Systems). It presents an integrated study of life at four levels: molecular, cellular, organismal, and social; leading the student to an awareness of the five unique characteristics of living material, i.e., Organized Structure, Specialized Function, Growth and Development, Heredity, and Evolution. Practical sessions will introduce the student to a wide range of material and techniques. *G. R. Thaler and Staff*

SDS () SES () WDS (x) WES (x) NCO ()

BIO 130E Man and Environment (Same as GGR 173E) 2L,TR9

Past and present man-environment relationships are examined; principles of ecology, environmental ethics and esthetics are outlined; crucial alternatives for man are discussed. The stability of the environment is studied in relation to economic exploitation. Values and restoration of degraded environments are also considered.

W. Harrison and J. Svoboda

Exclusion: GGR 173E

SDS () SES () WDS (x) WES () NCO ()

BIO 230E Ecology 2L,TR9; 3P,T2-5

An investigation of the interrelationships of plants and animals in the natural environment. The composition, structure, and functions of natural ecosystems at the individual, population, and community levels are considered. Extensive field and laboratory experience are provided.

Pre-requisites: BIO 100E/BIO 130E (GGR 173E). BIO 235E recommended either as a pre- or co-requisite for further studies in ecology.

SDS () SES () WDS (x) WES () NCO ()

- BIO 235E** **Field Biology (formerly BIO 135E)** **2T,T11-1; 3P,F1-4**
 (I) A field and laboratory course to acquaint the student with plants and animals in the local environment. Collection techniques and observation are emphasized in the field. Identification of major groups of animals and plants is studied in the laboratory. Students will be required to make a collection of some group of organisms. *D. L. Gibo and P. W. Ball*
Exclusion: BIO 135E
 SDS () SES () WDS (x) WES () NCO ()
- BIO 241E** **Cell Biology** **2L,MW11; 3P,M/T/W/R/F2-5**
 Cell structure and function. Cell organization at the organelle and molecular level will be considered in bacterial, animal, and plant cells. Topics include the structure and function of membranes, nuclei, mitochondria, plastids, and other organelles. In the laboratory the student will become familiar with current techniques of cell biology. *P. A. Horgen, D. H. O' Day, and J. C. Silver*
Pre-requisite: BIO 100E
 SDS () SES () WDS (x) WES () NCO ()
- BIO 250E** **Plant Form and Function** **2T,MW12; 3P,R2-5**
 A survey of the major plant groups from the Fungi and Algae up to the Angiosperms. The structure and life history of representatives are examined, including discussions of the functions of the major tissues and organs. The evolution of plants is discussed with particular reference to fossils. *J. Ammirati and P. W. Ball*
Pre-requisite: BIO 100E/P.I.
 SDS () SES () WDS (x) WES () NCO ()
- BIO 251E** **Animal Form and Function** **2L,MW10; 3P,M/W2-5**
 The "design" and adaptive consequences of vertebrate and invertebrate structures are examined. Mechanisms of prey capture, feeding, transport, gas exchange, body support, locomotion, and sensory perception are compared at the organ level. The student is encouraged to see beyond description in order to develop an appreciation of the adaptiveness of body parts. *G. K. Morris and P. J. Pointing*
Pre-requisite: BIO 100E
 SDS () SES () WDS (x) WES () NCO ()
- BIO 320E** **Plant Physiology** **2L,TR11; 3P,M2-5**
 The principal physiological processes, and the influence of environmental factors on them, will be studied in plants. Topics will include water relations, mineral nutrition, translocation, photosynthesis, respiration, general metabolism and growth and development. *W. R. Cummins*
Pre-requisites: BIO 100E, CHM 150E/120E
 SDS () SES () WDS (x) WES () NCO ()
- BIO 321E** **Introduction to Animal Physiology** **2L,W10,F11; 3P,F2-5**
 A comparative approach will be taken to the study of physiological processes in animals (including man). Emphasis will be placed on the understanding of underlying principles. Topics will include respiration, excretion, osmoregulation, ionic regulation, and the physiology of muscle and nerve. *B. I. Roots*
Pre-requisites: BIO 100E, CHM 150E/120E
 SDS () SES () WDS (x) WES () NCO ()

BIO 322F**Animal Behaviour I: Social Factors****2L,TR12; 3P,T2-5**

What animals do in responding to other organisms is considered from the viewpoint of the biologist. Students learn to describe and classify behaviour patterns and to interpret their immediate causes. Causal analysis involves a consideration of both external and internal state. Instinct is contrasted with the animal's ability to modify its behaviour during its lifetime. The relevance of evolution to the study of behaviour is emphasized. *G. K. Morris*

Pre-requisite: BIO 251E/P.I.

SDS () SES () WDS (x) WES () NCO ()

BIO 323ES**Animal Behaviour II: Physical Factors****2L,TR12; 3P,T/W2-5**

The responses of animals, largely invertebrates, to light, temperature, moisture, etc., both in the laboratory and in the field, as well as the consequences of their behaviour, are discussed. Arthropods, typically, are used in prescribed and student-designed experiments in the laboratory to illustrate a variety of these responses. *P. J. Pointing*

Pre-requisite: BIO 251E/P.I.

SDS () SES () WDS (x) WES () NCO ()

BIO 324E**Animal Physiology****2L,N; 3P,N**

A few topics will be studied in depth. Emphasis will be placed on the understanding of underlying principles. Topics will be selected from: respiration, excretion, osmoregulation, ionic regulation, endocrinology, muscle physiology, and others.

Pre-requisites: BIO 100E, CHM 150E/120E (CHM 270EF recommended), BIO 321E

SDS () SES () WDS (x) WES () NCO ()

BIO 330E**Plant Ecology****2L,MW9; 3P,W2-5**

The relationships of plant species, populations, and complexes at the sociological, environmental, and physiological level. Practical field work, laboratory studies, and experimentation are included. The course provides a background for practical training in conservation and environmental quality research. *P. F. Maycock and J. Svoboda*

Pre-requisite: BIO 230E/P.I. (BIO 235E recommended)

Co-requisite: BIO 235E recommended

SDS () SES () WDS (x) WES () NCO ()

BIO 332E**Freshwater Biology****1L,W12/F1; 4P,F2-5**

A functional analysis of aquatic ecosystems. Lecture topics include: physical environments of lakes and streams; determinants of algal, zoöplankton, and fish productivity; determinants of species structure at each trophic level; the process of eutrophication. In the laboratory, aquatic measurement techniques and taxonomy and ecology of local plants and animals will be emphasized. When possible, the latter will be studied in the context of field and laboratory investigations. One two-day and three one-day field trips required. *N. C. Collins*

Pre-requisite: BIO 230E/P.I.

SDS () SES () WDS (x) WES () NCO ()

- BIO 333EF Ecology of Forest Insects** 1L,N; 4P,R2-5
 With forest insects as examples, the characteristics of insects and their responses to the biotic and weather factors that influence their success, are discussed. The impact of insect outbreaks on forests, using case histories, is considered. In the laboratory recognition of various stages in the life history of forest insects and the characteristics of their attack on trees are stressed. *P. J. Pointing*
Pre-requisite: BIO 100E/P.I. (BIO 230E recommended)
 SDS () SES () WDS (x) WES () NCO ()
- BIO 334E Mycology** 2L,TR1; 3P,T2-5
 An introduction to the study of fungi dealing with their morphology, life histories and ecology, with emphasis on their significance for man. *J. Ammirati*
Pre-requisite: BIO 100E, BIO 250E
 SDS () SES () WDS (x) WES () NCO ()
- BIO 340E Genetics (formerly BIO 240E)** 2L,MW1; 3P,M/W2-5
 Presents current concepts in genetics with examples drawn from microbes, plants, animals, and viruses to illustrate: the molecular structure of the gene, mechanisms of gene action and gene regulation, levels of genetic organization, basic population genetics, and genetic aspects of evolution. Practicals will include both plant and animal material used in directed and independent experiments although the major emphasis will be on *Drosophila*. *D. L. Gibo and W. G. Filion*
Exclusion: BIO 240E
Pre-requisite: BIO 100E
Co-requisite: BIO 360E recommended
 SDS (x) SES () WDS (x) WES () NCO ()
- BIO 351ES Invertebrate Form and Function** 2L,3P
 The structure and classification of invertebrate animals. A continuation in greater depth of invertebrate topics begun in BIO 251E. *G. K. Morris*
Pre-requisite: BIO 251E/P.I.
 SDS () SES () WDS () WES () NCO (x)
- BIO 352E Developmental Biology (formerly BIO 252E)** 2L, TR10; 3P,T/W2-5
 A study of the important developmental events in plants and animals, including: gamete formation, fertilization and organogenesis. Emphasis is placed on all levels of development from the molecular to organismic. Laboratory exercises stress the dynamic aspects of development by frequently using live material. *P. A. Horgen and D. H. O'Day*
Exclusion: BIO 252E
Pre-requisite: BIO 100E, BIO 241E
 SDS (x) SES () WDS (x) WES () NCO ()
- BIO 355ES Taxonomy of Vascular Plants (formerly in part BIO 350E)** 5P,N
 A survey of the flora of Ontario. The emphasis of the course is on the practical identification of plants both in the herbarium and in the field. *P. W. Ball*
Exclusion: BIO 350E
Pre-requisite: BIO 235E/BIO 250E/P.I.
 SDS () SES () WDS (x) WES () NCO ()

- BIO 360E** **Biometrics (formerly BIO 260E)** **2L,MW9; 3P,M2-5**
 An introduction to the theory and application of statistics in biology. Topics will include probability theory, descriptive statistics, sampling theory, hypothesis testing, analysis of variance, experimental design, correlation and regression, and non-parametric methods. Collection and analysis of biological data will be carried out in the laboratory. *W. G. Sprules*
Exclusion: BIO 260E
 SDS () SES () WDS (x) WES () NCO ()
- BIO 370E** **General Microbiology** **2L,TR12; 3P,N**
 Historical development of microbiology; structure and ultrastructure of micro-organisms; physiology and nutrition of bacteria; growth and cultivation of bacteria; nature of viruses; bacteriophage and a limited survey of animal viruses and their properties; micro-organisms in medicine, industry and agriculture; immunology and immunochemistry, microbial physiology, microbial genetics and microbial ecology. *A. Guha*
Pre-requisites: BIO 100E, CHM 150/120E
Co-requisites: BIO 241E (CHM 240E recommended)
 SDS () SES () WDS (x) WES () NCO ()
- BIO 371ES** **Virology** **2L,M2,R9; 3P,N**
 Fundamental principles and techniques of animal virology, including methods of tissue culture, virus cultivation and assay, and physiology of virus development, will be dealt with in detail.
Pre-requisites: BIO 100E, CHM 150/120E
Co-requisite: BIO 370E (BIO 241E recommended)
 SDS () SES () WDS (x) WES () NCO ()
- BIO 420E** **Advanced Plant Physiology: Photobiology** **2L,1T**
 Lectures, discussions and student presentations from the current literature will examine the following topics: photosynthesis, including the primary photochemical events, whole cell photosynthesis, and the efficiency of light use; phototropisms; photomorphogenesis; stomatal movements; phytochrome mediated responses; photoperiodisms; and circadian rhythms. *W. R. Cummins*
Pre-requisite: P.I.
 SDS () SES () WDS () WES () NCO (x)
- BIO 422ES** **Acoustic Behaviour** **3S,T7-10**
 The role of sound in animal communication. Mechanisms of sound production and reception, the signal function of sounds, and recording and analysis techniques are the major topics studied. *G. K. Morris*
Pre-requisite: Introductory knowledge of animal behaviour (e.g., BIO 322EF, BIO 323ES) and P.I.
 SDS () SES () WDS () WES () NCO (x)
- BIO 424ES** **Physiology of Sense Organs** **2L,3P**
 A comparative study will be made of the sense organs of animals.
Pre-requisites: BIO 100E, CHM 150/120E, PHY 135E/E, P.I.
 (BIO 321 recommended)
 SDS () SES () WDS () WES () NCO (x)

- BIO 430E World Ecosystems**
- An investigation of the major plant and animal communities of the world. Their distribution, composition, structure, productivity, and dynamic aspects will be considered in relation to environmental influences.
- A two week field trip commencing the week before classes begin, provides practical experience in five of the major communities in the region from James Bay to Lake Erie in Ontario. *P. F. Maycock*
- Pre-requisites:* BIO 230E, BIO 330E, P.I.
- SDS () SES () WDS () WES () NCO (x)
-
- BIO 431E Advanced Animal Ecology 3S,T11,R11-1**
- Advanced studies in the ecology of animal populations and communities, with emphasis on the following topics: production and population dynamics; energy flow; competition theory; predator-prey interactions; community diversity; life history strategies; and ecological models. *N. C. Collins and W. G. Sprules*
- Pre-requisite:* BIO 230E (BIO 360E recommended), CSC 108F/P.I.
- Co-requisite:* CSC 108F/P.I.
- SDS () SES () WDS (x) WES () NCO ()
-
- BIO 433ES Arctic Ecology 2L,N; 1T,N**
- The Arctic environment (climate, landscape, frost phenomena) is investigated. The characteristics of soils, plants and animal life are described and studied.
- Pre-requisite:* BIO 230E
- SDS () SES () WDS (x) WES () NCO ()
-
- BIO 435EF Biogeography 3S,T7-10**
- The historical descriptive, and dynamic aspects of large-scale distributional patterns of plants and animals are examined. Course work consists of lectures, class discussions and written assignments based on a variety of published material. *G. R. Thaler*
- Pre-requisite:* BIO 230/P.I. (BIO 340E recommended)
- SDS () SES () WDS () WES (x) NCO ()
-
- BIO 440EF Population Genetics 2L,N; 3P,N**
- The behaviour of genes in populations, mechanisms for changing gene frequencies, maintenance of genetic diversity, and the consequences of population size, inbreeding, and selection, are the topics that will be covered. Labs include studies of gene frequencies in field populations, and model testing. Course will alternate with BIO 442EF. *D. L. Gibo*
- Pre-requisite:* BIO 340E/P.I.
- SDS () SES () WDS (x) WES () NCO ()
-
- BIO 441EF Electron Microscopy 1L,R1; 3P,N**
- An introduction to the theory and practice of electron microscopy and its application to the study of the ultrastructure of cells and tissues. *B. I. Roots*
- Pre-requisite:* P.I.
- SDS () SES () WDS (x) WES () NCO ()
-
- BIO 442EF Evolution 2L; 3P**
- Mechanisms of speciation, development of mimicry, character displacement, role of genetic drift, and the founder effect are some of the topics that will be covered.

Labs include selection experiments, model testing, and individual seminars. Course will alternate with BIO 440EF. *D. L. Gibo*

Pre-requisite: BIO 340E

SDS () SES () WDS () WES () NCO (x)

BIO 444EY Cytogenetics 2L,N; 3P,N

Selected topics of current interest in cytogenetics will be examined, including discussion of certain specialized areas, e.g., organization and behaviour of chromosomes, and chromosome aberrations. Students must consult the instructor prior to registration. *W. G. Filion*

Pre-requisite: BIO 340E or equivalent

SDS () SES () WDS (x) WES () NCO ()

BIO 445ES Behaviour Genetics 2S,N

An examination of the principles of genetics and psychology as they apply to understanding the behavioural development of man and other animals. Topics will include empirical studies of the interaction between genotype and environment as well as ethical and social implications arising from research with humans.

C. M. Corter and W. G. Filion

Pre-requisites: BIO 100E and written P.I. (BIO 340E recommended)

Co-requisite: BIO 340E

SDS () SES () WDS (x) WES () NCO ()

BIO 452ES Current Topics in Developmental Biology 3L,R3-5

The course focuses on the contributions of various scientists to the understanding of such problems as growth, cell division, cell communication, and morphogenesis. Informal seminar sessions involve critical discussions of recently published research articles. *D. H. O'Day*

Pre-requisite: BIO 241E, BIO 352E, P.I.

SDS () SES () WDS (x) WES () NCO ()

BIO 455EF Developmental Molecular Biology 1L,N; 1T,N

An examination of recent information on the molecular control of development in eukaryotes. Current ideas on the regulation of nucleic acid biosynthesis (nucleo-proteins, hormones, "specificity factors") will be reviewed for plants, animals, and eukaryotic microbes. An analysis of how current data fit into the theoretical models of gene regulation and development will be made. The course will include student discussions of published research articles. This course is the same as BOT 455F (St. George Campus). Every other week the class meets on the St. George Campus. *P. A. Horgen*

Pre-requisites: BIO 340, BIO 352E, BIO 241E, P.I.

SDS () SES () WDS (x) WES () NCO ()

BIO 460E Microbial Ecology 2L,N; 3P,N

To provide an understanding of the role of micro-organisms in nature and the effects of human society upon this role. The course will cover the microbial ecosystem, its dynamics and the identification of the micro-organisms involved in biological cycles, symbiosis and selected industrial processes.

Pre-requisites: BIO 370E, BIO 230E

Co-requisite: CHM 240E

SDS () SES () WDS (x) WES () NCO ()

To provide a background for students of biology and other sciences for further study in modern biology. The course will deal with microbial and viral genetics; the structure, function, and biosynthesis of nucleic acids and proteins; cell permeability; bioenergetics; regulatory mechanisms in bacteria; modern physio-chemical methods in studies of biomolecules, etc. *A. Guha, P. A. Horgen, and J. C. Silver*

Pre-requisites: BIO 241E, BIO 370E, P.I.

Co-requisite: CHM 360E

SDS () SES () WDS (x) WES () NCO ()

BIO 480EY

Biology Research Project I

A research project carried out under the supervision of a staff member. Open to third or fourth year students. Written consent of staff member supervising the project must be obtained for registration.

SDS () SES () WDS (x) WES () NCO ()

BIO 481EY

Biology Research Project II

Open only to fourth year students. A fourth year student may combine BIO 480EY and BIO 481EY into a single project. Written consent of the supervising staff member must be obtained for registration.

SDS () SES () WDS (x) WES () NCO ()

CHEMISTRY

Faculty Advisor: Professor I. W. J. Still

Chemistry is both a challenging intellectual pursuit and a dominant force in shaping modern civilization. Modern chemistry provides an understanding of the structures and properties of atoms and molecules and uses this knowledge to interpret and predict changes associated with chemical reactions. In addition to its vital role in modern science-based industry, chemistry has an increasingly important bearing on other sciences such as biology, the medical sciences, psychology, geology, metallurgy and astrophysics. As an intellectual pursuit it is also becoming increasingly recognized as a sound basis for other walks of life, combining as it does the need for both disciplined and imaginative thinking. This is reflected in the courses offered in the recommended programme in Chemistry. The basic core of chemistry courses, with ancillary Mathematics and Physics, will enable the student to choose courses at the fourth year level reflecting his specific area of interest.

The Chemistry programme offered at Erindale College is a very suitable preparation for those intending to teach chemistry in High School (Type A certificate), continuation into graduate work or entry into industry. It also includes courses for those working in cognate disciplines such as biology and earth and planetary sciences.

Chemistry Specialist Programme at Erindale

Year I CHM 150, MAT 135/139E, PHY 135E

Year II CHM 220/221, 230, 240, MAT 235/239E/APM 251E, PHY 230/
another 200-series course in Science/Mathematics (CHM 215F recommended)

Year III CHM 320/321, 330, 340 and CHM 360E or another Science or Mathematics

Year IV Three 400 series courses in chemistry

Chemistry and Biochemistry Specialist Programme at Erindale

Year I	CHM 150, MAT 135/139E, PHY 135E, BIO 100E/110E
Year II	CHM 220/221, 230S, 240, MAT 235/239E/APM 251E (CHM 215F recommended)
Year III	CHM 320/321/330, CHM 340, CHM 360E, CHM 371EH, CHM 347S (BIO 370E recommended)
Year IV	At least one BCH and two CHM courses at 400-level, and one course from BCH/CHM/BIO 470

Chemistry (with Physics) Specialist Programme at Erindale

Year I	CHM 150, MAT 139E/135, PHY 135E
Year II	CHM 220/221, 240/230S, APM 251E, MAT 239E, PHY 254E (CHM 215F recommended)
Year III	CHM 320/321, 230S/240, 340/330, APM 351E, PHY 230E
Year IV	Two 400-level CHM courses, two PHY courses from among PHY 352E, PHY 355E, 450E, and 455ES + 456ES, one additional CHM or PHY. Choice of fourth-year courses must be approved by the Chemistry Department

Note: For a balanced training in chemistry, students should take CHM320/321, 330, and 340

Chemistry Minor Programme at Erindale

The following courses are recommended as a suitable selection for combination with other minor programmes or as a coherent introduction to the basic essentials of chemistry.

CHM 150/118E; CHM 220/221, 230S, 240: one from CHM 320/321, 330, 340, *and* two other 300- or 400-level chemistry courses (Note: CHM 320/321 has a MAT pre-requisite not required by other 300-level courses.)

Type A Certificate of Education

For a chemistry specialist this requires a minimum of *nine* courses in chemistry, with a B-average standing, to be taken during a four-year course.

CHM 118E General Chemistry

3L(Fall), MWF11/1; 2L(Spring), N; 3P, M/T/W/R/F, 9-12/2-5

Fall term: Descriptive chemistry, periodic trends, chemical stoichiometry, gases and liquids, statistical treatment of data, equilibria, thermodynamics, kinetics and mechanisms. (This material is identical with the fall term of CHM 150.)

Spring term: Applications of the principles of equilibria, kinetics and mechanisms; atomic and molecular structure, descriptive organic and inorganic chemistry — structures of solids, asymmetry in nature. *J. C. Poë*

Exclusion: CHM 150

Pre-requisite: GR XIII CHM

Co-requisite: MAT 130E/134/135/139E

Note: CHM 118E is a sufficient pre-requisite *only* for CHM 215EF and CHM 270EF of the higher-level chemistry courses unless special permission is obtained. This will be granted only for students of high standing and/or who undertake an assigned independent study programme during the summer and pass a

qualifying test. Applications for this programme *must* be made to the CHM 118E/150 instructors before May 1st.

Students who know that they wish to take only first year chemistry, or first year plus CHM 215F and/or CHM 270EF, are encouraged to enroll in CHM 118E. Transfer to CHM 150 in the spring term will be allowed to those who change their mind and meet the CHM 150 requirements.

SDS () SES () WDS (x) WES () NCO ()

CHM 150 Basic Concepts of Chemistry (formerly CHM 120E)

3L(Fall,MWF11/1; 2L(Spring,N); 3P,M/T/W/R/F,9-12/2-5

Fall term: Descriptive chemistry, periodic trends, chemical stoichiometry, gases and liquids, statistical treatment of data, equilibria, thermodynamics, kinetics and mechanisms. (This material is identical with the fall term of CHM 118E.)

Spring term: Introductory quantum theory and wave mechanics, atomic structure, periodic properties, bonding in molecules, introductory organic chemistry. (The laboratory courses for CHM 150, and 118E are identical.) *J. C. Pož*

Exclusion: CHM 118E

Pre-requisite: Gr. XIII CHM; a minimum of 60% in the fall term in order to continue in CHM 150. Those not qualifying in this way must transfer to CHM 118E.

Co-requisite: MAT 130E/134/135/139E (MAT 135/139E and PHY 135E required for specialist programmes in chemistry)

Note: Only students intending to go on to higher-level chemistry courses should enroll in CHM 150 *initially* (see description of CHM 118E).

SDS () SES () WDS (x) WES () NCO ()

CHM 215F Fundamentals of Analytic Chemistry

2L,TR9; 4P,T/R1-5

Introduction to the theory and practice of classical analytical chemistry including gravimetric and volumetric techniques, oxidation-reduction methods in inorganic and organic analysis, basic electrochemical and calorimetric methods, analytical separation techniques and the treatment of analytical data.

Pre-requisite: CHM 120E/150/118E

SDS () SES () WDS (x) WES () NCO ()

CHM 220 Introduction to Physical Chemistry

3L,MWF10

The following topics will be discussed — Basic thermodynamics, chemical potentials, thermodynamic manipulations, solution thermodynamics. Electrochemistry and solution chemistry. Surface chemistry, phase equilibria, and colloid chemistry. Reaction kinetics and catalysis (mechanisms). Introductory quantum mechanics and application to chemistry. Spectroscopy, including applications of infrared, ultraviolet, nuclear magnetic resonance, electron spin resonance. Introductory mass spectrometry and x-ray analysis. *J. M. Deckers*

Exclusion: CHM 221

Pre-requisites: CHM 120E/150, MAT 139E/135

Co-requisites: None (MAT 239E/235/APM 251E recommended)

SDS () SES () WDS (x) WES () NCO ()

CHM 221 Introductory Physical Chemistry

3L,MWF10; 2P,F1-5 (Spring)

The lectures in this course will be identical with CHM 220. The course differs in providing a 4-hour per week laboratory for half the year with selected experiments

in physical chemistry. The sequence CHM 221–CHM 321 is identical with CHM 220–CHM 320. *J. M. Deckers*

Exclusion: CHM 220

Pre-requisites: CHM 120E/150, MAT 139E/135

Co-requisites: None (MAT 239E/235/APM 251E recommended)

SDS () SES () WDS (x) WES () NCO ()

CHM 230S Introduction to Inorganic Chemistry 2L,MW1; 4P,T/R1-5

Ionic bonding and lattice structures and energies. Solution chemistry and solubilities. Covalent bonding and stereochemistry. Descriptive chemistry of hydrogen and the first period. Introduction to transition metal chemistry and metal complexes. *G. A. Ozin and A. J. Poë*

Pre-requisite: CHM 120E/150

SDS () SES () WDS (x) WES () NCO ()

CHM 240 Introduction to Organic Chemistry 2L,TR11; 4P,M/T/W/R1-5 (Fall term)

The synthesis and reactivity of the major classes of organic compounds will be discussed from the standpoint of modern theories of structure and reaction mechanism. The chemistry of some natural products such as carbohydrates, amino-acids and peptides will also be considered.

The basic laboratory techniques and selected examples of the synthesis and spectroscopic analysis of organic compounds will be presented in the laboratory in such a way as to complement the lecture material. *I. W. J. Still*

Pre-requisite: CHM 120E/150

SDS () SES () WDS (x) WES () NCO ()

CHM 270EF Physico-chemical Methods for Life Sciences 2L,F9,10; 3P,F2-5

The course will discuss the following physical chemical topics with special emphasis on their applications in the Life Sciences: solution chemistry, thermodynamics, colligative properties, kinetics, diffusion, molecular weight determinations by viscometry and sedimentation, movement of ions in solution and electrophoresis, chromatography and spectroscopy.

Pre-requisites: CHM 120E/150/118E

SDS () SES () WDS (x) WES () NCO ()

CHM 315ES Instrumental Methods in Analytic Chemistry 2L,N; 4P,N

This course is designed to provide an appreciation of the scope and limitations of some of the more common techniques of instrumental analysis. A range of instrumental experience is available in the laboratory to allow students to direct their programmes according to their individual interests and/or needs. The lectures will cover the basic theory behind many of the commoner instrumental methods and will discuss the general approach to analytical problems and the treatment of results.

Pre-requisites: CHM 230, CHM 215F (CHM 270EF/220/221 recommended)

SDS () SES () WDS (x) WES () NCO ()

CHM 320 Physical Chemistry 2L,MW12; 4P,F9-5 (8 hours every second week)

Quantum statistical mechanics. The solid and liquid states. Physical chemistry of surfaces. Photochemistry. The long laboratory period allows quite advanced

experiments to be undertaken. *J. M. Deckers*

Exclusion: CHM 321

Pre-requisites: CHM 220, MAT 239E/235/APM 251E

SDS () SES () WDS (x) WES () NCO ()

CHM 321 Physical Chemistry 2L,MW12; 2P,N

The lectures in this course will be identical with CHM 320. The laboratory will be one-half of the laboratory of CHM 320 and will consist of a selection of experiments in physical chemistry. *J. M. Deckers*

Exclusion: CHM 320

Pre-requisite: CHM 221, MAT 239E/235/APM 251E

Co-requisite: None (MAT 335E recommended)

SDS () SES () WDS (x) WES () NCO ()

CHM 330 Advanced Inorganic Chemistry 2L,TR11; 4P,N

Chemical applications of symmetry theory. Descriptive chemistry of the main group of elements. Theories of bonding in transition metal complexes. Chemistry of metal carbonyls and nitrosyls, etc. Organometallic compounds and hydrides. Thermodynamics of complex formation. Mechanisms of reactions of metal complexes. Descriptive chemistry of transition metals. The laboratory course covers a wide range of synthetic and instrumental techniques and is associated with an informal programme of tutorials. *A. J. Poë and G. A. Ozin*

Pre-requisite: CHM 230S

SDS () SES () WDS (x) WES () NCO ()

CHM 340 Advanced Organic Chemistry 2L,TR10; 4P,W/R1-5

The stereochemistry of organic compounds in relation to their physical and chemical properties and to factors affecting rates of reaction. Mechanistic aspects of organic reactions. The application of both stereochemical and mechanistic considerations to the synthesis of polyfunctional organic compounds in both lecture and laboratory. *I. W. J. Still and M. A. Winnik*

Pre-requisite: CHM 240

SDS () SES () WDS (x) WES () NCO ()

CHM 347S Organic Chemistry of Biologically Important Compounds 2L,N

The chemistry of selected classes of naturally occurring molecules will be discussed, with emphasis on structure, stereochemistry, properties and synthesis. Classes of compounds to be studied include: amino acids, peptides, proteins, carbohydrates, nucleosides, nucleotides, nucleic acids, terpenes, steroids and alkaloids.

Co-requisite: CHM 340

SDS () SES () WDS (x) WES () NCO ()

CHM 360E Biological Chemistry 2L,MW9; 1T,N

A lecture course in general biochemistry treating physical chemistry of proteins, enzyme reaction kinetics and mechanisms, metabolic processes and control mechanisms, biosynthetic pathways of small molecules, nucleic acids and protein synthesis, and bioenergetics. In the spring term each student will prepare a term paper, based on literature research in a topic of current biochemical interest, and will discuss it in a seminar. This course is an acceptable equivalent to

BCH 320/321 as pre-requisite for fourth-year courses in Biochemistry.

M. A. Winnik, J. C. Poë

Pre-requisites: CHM 240 and CHM 220/221, CHM 270EF (CHM 230S recommended)

Co-requisite: CHM 340 recommended

SDS () SES () WDS (x) WES () NCO ()

CHM 371EH A Laboratory Course in Biochemistry

3P,N

To complement CHM 360E and prepare for BCH 471H (St. George). (Equivalent to BCH 371H, St. George.)

Co-requisites: CHM 360E and P.I.

SDS () SES () WDS (x) WES () NCO ()

CHM 410E Topics in Chemistry

2L,MW2-5

A series of topics covering major areas of current interest in inorganic, organic and physical chemistry such as organometallic chemistry, organic synthesis, spectroscopy, kinetics, organic and inorganic reaction mechanisms, and the chemistry of biochemically important molecules. A total of 75 lectures will be given and students will have to choose topics totalling 50 lectures.

Pre-requisites: CHM 220/221, 330, 340 and P.I.

SDS () SES () WDS (x) WES () NCO ()

CHM 411E Topics in Chemistry

1L,MW2-5

This course will comprise 25 lectures on topics not already chosen from CHM 410E

Pre-requisite: CHM 320/321

Co-requisites: CHM 410E and P.I.

SDS () SES () WDS (x) WES () NCO ()

CHM 415E Dissertation Based on Literature Research

The dissertation will be based on literature research of a given area and would be expected to occupy one-fifth of a student's programme. Introductory reading will be necessary early in the course to bring students to a level where they can appreciate the most recent work in their topic. The dissertation will be conducted under the guidance of a chemistry faculty member on a topic other than the student's research topic in CHM 419.

Pre-requisites: P.I. and CHM 220/221, 330, 340

SDS () SES () WDS (x) WES () NCO ()

CHM 419E Introduction to Research in Chemistry

An experimental or theoretical research problem in chemistry under the supervision of a member of the chemistry staff. The total time involved would be of the order of 250 hours, and students, in addition to carrying out research on their own projects, will be encouraged to participate fully in the activities of their chosen research groups. A final report incorporating the aims and results of this research will be required.

Co-requisites: At least one 400-level chemistry course and P.I.

SDS () SES () WDS (x) WES () NCO ()

CLASSICS

(See also Greek and Roman History (GRH),
Greek and Latin Literature (GLL), and Latin (LAT))

Faculty Adviser: T. G. Elliott

Classics is the study of the civilizations of Greece and Rome. The achievements of these civilizations are of interest in their own right, but they are also interesting in that they have been the foundation of so many aspects of our own civilization; of art, literature, philosophy, government. Courses in Classics thus present background material which is indispensable for the understanding of many other studies in the Humanities.

Courses are offered at Erindale in two main areas, neither of which requires knowledge of the original languages: (1) Greek and Roman History (GRH). (Upon petition to the Department of History students may receive credit for these courses toward the Specialist Programme in History.) (2) Greek and Roman Literature, read in translation (GLL). (This heading also includes the study of myth and religion.) Elementary courses in Latin (LAT) are also offered.

Minor Programme in Classical Civilization: The Programme consists of six courses which must include (i) one GRH course, (ii) one GLL course, (iii) FAH 101 (Ancient Art), and (iv) three other Classics courses or relevant courses offered by other departments (e.g., PHL 240F, 241S, HIS 485, 486). Language courses in Latin or Greek may be included but are not required. The Programme is designed to meet the needs both of students seeking a broad survey of Greek and Roman culture and of specialists in other Humanities subjects who require background knowledge of Classics for their particular interests, whether literary, historical or philosophical.

See also Greek and Roman History (GRH), Greek and Latin Literature (GLL), and Latin (LAT).

COMMUNICATIONS

CMM 100 Introduction to Communication Theory and Research 3L,N

This course aims at presenting the major theories of verbal and nonverbal communication. The principal purpose is to familiarize the student with the various possibilities of analyzing communication from the point of view of psychology, sociology, philosophy, linguistics, drama, physics and religious studies. The course further aims to acquaint the student with the research methods most commonly used in designing experiments in communication. *P.'Lorion and staff*

SDS () SES () WDS (x) WES () NCO ()

CCM 220EF Communications I 2L,M3-5

(I) Bits, Bytes and Bandwidth, Shannon's Theorem. Fundamental physical limitations on information transfer. IMPACT OF TECHNOLOGY — telephone, radio, TV cable. New storage techniques such as magnetic bubbles, holograms, etc. Computers, new transmission techniques, lasers, superconductors, satellites. etc. SOCIAL & PSYCHOLOGICAL IMPLICATIONS — the city as a communications device. Effect of shopping, learning and working at home. Future Shock and Information Overload. Increased individuality. ECONOMIC & POLITICAL IMPLICATIONS — Economic limit on the rate of innovation. Data Banks and Privacy. Communications vs. Transportation. Costs. Impact on Energy Resources. GOVERNMENT CONTROL & PLANNING — The Telecommunication Study, Von Baeyer Report. The Trans-Canada telephone system, CRTC and cable companies. *P.P. M. Meincke*

SDS () SES () WDS (x) WES () NCO ()

This course examines the different ways that the flow and the content of information is controlled by various agencies, as well as the effects of censorship — or lack of it — on society. *A. L. Stein*

Pre-requisite: P.I.

SDS () SES () WDS () WES (x) NCO ()

CMM 330E

Stigmatization, Liberation and Communication

1L, 1T, M5-7

Topics of study: 1. verbal and nonverbal aspects of the deviant labelling process, e.g., namecalling, exclusion, patronizing, etc.; 2. alternatives of identity management by the stigmatized: accepting and adapting to the stigma, "passing", seeking to shed the stigma by therapy and rejecting the stigma; 3. verbal and nonverbal communication among members of the same stigmatized group, inter-group communication and communication between stigmatized and stigmatizer. Special emphasis will be placed on the communicational processes and media of the ethnic, the gay, the feminist and the "insane" liberation movements. The course will consist of lectures, discussions and stimulated social encounters. Students will be expected to undertake "field research" during the second term. *A. L. Stein*

Pre-requisite: P.I.

SDS () SES () WDS (x) WES (x) NCO ()

COMMERCE

Faculty Advisor: M. Berkowitz

The objective of the programme in Commerce is to help students develop the analytical and problem-solving abilities required for effective decision-making in business, industry, governmental and other agencies and society in general. Those students who pursue the B.COM. programme at Erindale will have the opportunity to develop managerial skills in general as well as professional skills in accounting. Graduates of the programme have traditionally pursued careers in accounting and finance as well as undertaken graduate studies in law, management and economics.

Students who emphasize other subject matter in their degree programmes find that Commerce courses are useful for both understanding commercial operations in Canada and the development of the skills of analysis and decision-making vital in many areas of endeavour which involve the planning, organizing and controlling of activities.

The basic Commerce courses (COM 100 and COM 221/222) introduce accounting systems and the bases for information systems for management. Other courses (300- and 400-level) examine structures, processes and problems in areas such as organizational behaviour, managerial operations in public and private organizations, marketing, the legal environment of business, accounting and taxation principles and practices and financial management.

For those interested in professional accounting, some of the Commerce courses qualify for credits in the programme in chartered accountancy offered by the Institute of Chartered Accountants of Ontario.

The B.COM. programme, which is now available at Erindale for all four years of study, is a 23 course programme featuring five courses in the first year (COM 100, ECO 100 and MAT 134 are advised) and six courses in each of the subsequent years. Interested students should obtain a programme description ("The B.COM. at Erindale") and consult the Faculty Advisor.

COM 100

Financial Accounting

2L, 1T, MWF9/TRF 9/W 7-9

Basic theory and concepts which underlie the preparation of financial statements; development of double entry theory and practice; the accounting cycle from the

recording of transactions in double entry form to the year end entries and preparation of financial statements; problems of measuring income. Enrolment is strictly controlled. Available to first year students only.

Exclusion: COM 102

SDS () SES (x) WDS (x) WES (x) NCO ()

COM 102 Financial Accounting 2L, 1T, MW10, F9

Same as COM 100. Open to all years.

Exclusion: COM 100

SDS () SES () WDS (x) WES () NCO ()

COM 221F Management Accounting 2L, F9-11/TR9/T7-9

Management control is introduced through case discussions. Topics include the relationship between cost, volume and profit; the elements of cost; overhead allocation; job order costs; process costs; budgeting; predetermined costs; and absorption and direct costing.

Pre-requisite: COM 100/102

SDS () SES (x) WDS (x) WES (x) NCO ()

COM 222S Information Systems and Control 2L, F9-11/TR9/M7-9

Includes information systems, control theory and practice, relevant costs, responsibility accounting, capital budgeting, and a survey of selected management science techniques. Through case discussions, the inter-relationships between information and control systems, managerial style and human behaviour are established.

Pre-requisite: COM 221F

SDS () SES (x) WDS (x) WES (x) NCO ()

COM 231S Finance 2L, MW11

An introduction to business finance, this course considers capital budgeting as a basis for discussion of the role of the financial manager and the characteristics of various debt and equity instruments in Canadian capital markets. Not available to students in the Commerce & Finance Programme.

Exclusion: COM 331, 421, 337F

Pre-requisite: COM 221F

Co-requisite: ECO 100/102

SDS () SES () WDS (x) WES () NCO ()

COM 300 The Legal Environment of Business 2L, T9-11/R9-11

The course has two main purposes: to develop an approach to reaching decisions objectively; to examine how the law, as an institution, accommodates business convenience and social policy. In addition, the nature of legal devices that are commonly encountered in the operation of a business is examined. The lecture periods take the form of class discussion of cases and of topical matters related to business law. Open to Second Year students at the discretion of the instructor if space is available and pre- and co-requisites are satisfied.

Pre-requisite: ECO 100

Co-requisite: COM 221F and COM 222S/COM 231S or COM 320

SDS () SES () WDS (x) WES () NCO ()

COM 320 Financial Accounting Theory and Policy 2L, TR11/T7-9/MW10

An extension of financial accounting topics previously covered, this course emphasizes areas of current concern such as: inventory valuation; accounting for fixed assets and intangibles; corporate reorganizations; and inter-corporate investments.

The case method of instruction is used extensively. This course may not be taken in the same session as COM 221F or 222S. In the event space is inadequate, priority will be given to students who have completed COM 221F and 222S.

Pre-requisite: COM 100/102

SDS () SES () WDS (x) WES (x) NCO ()

COM 323 Introduction to Public Administration 2L, 1T, W10-12

The literature of public administration and some of the main issues of the present and recent past in Canada and to a limited extent in Britain and other countries. In other countries primary emphasis will be on policies or features that have influenced Canadian practice.

Pre-requisite: COM 100/102/POL 100

Exclusion: COM 441F, COM 442S

SDS () SES () WDS (x) WES () NCO ()

COM 324S Investments 2L, MW1

The principles and risks underlying various investment media are considered. Included are shares, bonds, life insurance, real estate, mortgages and mutual funds. The course also examines the sources of financial information critically.

Pre-requisite: COM 100/102 and ECO 202

Co-requisite: COM 221F and 222S or COM 320 and COM 231/COM 337F/COM 331/COM 421

SDS () SES () WDS (x) WES () NCO ()

COM 327S Auditing 2L, M9-11

This course examines the development of the attest function in society today giving consideration to ethical, legal and statutory influences on the development of generally accepted auditing standards. Consideration is given to the expansion of the public accountant's scope of activity into the area of management evaluation. Control structures are examined and related to the nature of audit evidence and judgment formation. The selection, scope and application of auditing procedures are examined through the selective analysis of asset, liability, revenue and expense items.

Pre-requisite: COM 320

SDS () SES () WDS (x) WES () NCO ()

COM 332E Organizational Behaviour 2L, M2-4

Examines how the interrelationship between tasks, authority positions and the needs of the individual govern effectiveness in organizations. Students will consider problems of organization structure, interpersonal relations, attitudes, conflict and the management of change. The course also examines the relationships of organizations and their environments. Assigned reading, case studies and role-playing exercises are used. Limited enrolment.

Pre-requisite: COM 222S/P.I.

Exclusion: COM 401

SDS () SES () WDS (x) WES () NCO ()

COM 337F Business Finance 2L,MW1

This course takes an integrated approach to the financing, investment, and dividend

SDS () SES () WDS (x) WES () NCO ()

2L, W2-4

SDS () SES () WDS (x) WES () NCO ()

2L, T12-2

SDS () SES () WDS (x) WES () NCO ()

2L,MW1; 1T,N

SDS () SES () WDS (x) WES () NCO ()

2L, T2-4

SDS () SES () WDS (x) WES () NCO ()

2L, R1-3

Designed to provide an introduction to both the technical provisions and broad

policy issues involved in taxation of business enterprises in Canada. Emphasizes both the underlying social and economic policy issues of taxation and the understanding of technical income tax provisions. In the event enrolment has to be limited, preference will be given to students who have also completed ECO 202 or who (if specially registered) hold a university degree.

Pre-requisite: COM 222S/231S

SDS () SES () WDS (x) WES () NCO ()

COM 426F Management Policy 2L,M2-4

Deals with the management of an organization and its domestic environment in terms of the strategic issues of goal setting and operating policy formulation, implementation and control as a function of changing domestic, social and economic conditions.

Pre-requisite: COM 222S and ECO 202/212

Co-requisite: COM 421

SDS () SES () WDS (x) WES () NCO ()

COM 427S Management Policy and the International Environment 2L, M2-4

An extension of COM 426F, deals with the managerial problems and opportunities which are a function of the changing economic environment. Topics include: managing operations abroad, foreign patterns of investment and their operational significance, parent-subsidiary relationships, multinational competition and government and supranational regulation of organizational activities.

Pre-requisite: COM 426F

SDS () SES () WDS (x) WES () NCO ()

COM 437S Business Finance II 2L

The financial environment within which Canadian companies operate is considered. The course examines the social and legal significance of the corporation as one of the dominant institutions of modern society. This is a required course in the Commerce and Finance Programme and priority is given to students enrolled in that programme.

Pre-requisite: COM 337S

Co-requisite: One of ECO (310F and 311S), (325F and 326S), 328 and COM 425

SDS () SES () WDS () WES () NCO (x)

COMPUTER SCIENCE

Faculty Advisor: Professor C. R. Crawford

Computer Science is concerned with the storage and manipulation of information in machines. Of primary importance is the concept of a procedure or algorithm which specifies in a computer language a method of carrying out a desired information processing function.

Applications of computing techniques occur in almost every field today: analysis of molecular structures, synthesis of music, studies of literary style, models of transportation networks, national economics, and even the whole world.

Students wishing to specialize or to have a strong "minor" in Computer Science are advised to take CSC 148F, 158S, and MAT 134/135/139 as the pre-requisites for higher level courses. Stu-

dents contemplating a career in teaching are advised to select at least two of the second year courses. Students who wish to obtain only an introduction to computers should take CSC 108F, 118S.

Specialist Programme in Computer Science

First Year: CSC 148F, CSC 158S, MAT 134/135 (3 options)

Second Year: CSC 228F, CSC 248S, CSC 258F, MAT 235/234 (2½ options)

Third Year: STA 232 and four of CSC 334F, CSC 344S, CSC 348F, CSC 351S, CSC 364S, CSC 399Y (2 options)

Fourth Year: Courses on St. George Campus as specified by Computer Science Department.

Specialists wishing further mathematics courses should consider some of the following: APM 251, MAT 204F, MAT 209S, MAT 129E, MAT 229E.

Specialists contemplating a career in business data processing should consider the sequence COM 100, COM 221F, COM 222S.

Some examples of other courses which may be usefully related to a Computer Science programme are CMM 220ES, LIN 200.

The course numbers indicate the year in which a course is normally taken, but this indication is not meant to be restrictive. Any computer science course may be taken whenever a student has the pre-requisites or can obtain waiver of pre-requisites.

CSC 108F Computer Programming 2L,MW12/T7-9; 2T,N

Introduction to algorithms, programming and computer organization, and assembly language. Emphasis will be placed on learning to programme in a high-level language, structured programming, and simple applications. (This course is especially for students who want to learn programming for use in their own areas of interest.)

Exclusion: CSC 148F

SDS () SES () WDS (x) WES (x) NCO ()

CSC 118S Programming Applications 2L,MW12/T7-9; 1T,N

A continuation of CSC 108F. Analysis of practical problems involving numerical computations, statistical calculations, simulations, data processing, and the manipulation of non-numerical data (e.g., words). Examination of the impact of computers on social, political, and economic structures.

Exclusion: CSC 158S

Pre-requisite: CSC 108F/Y/148F

SDS () SES () WDS (x) WES (x) NCO ()

CSC 148F Introduction to Computing 2L,MW12; 2T,N

Introduction to algorithms and problem solving with computers. Programming with a high-level language such as PL/I. Structured programming and problem solving. Illustrative applications. Elementary computer organization, assembly language, and compiling techniques. (This course is more intensive than 108F and is intended for students who plan to pursue a specialist programme in Computer Science, or wish to have a strong minor in Computer Science.)

Exclusion: CSC 108F

Co-requisite: MAT 134/135/139

SDS () SES () WDS (x) WES () NCO ()

- CSC 158S Computer Applications 2L,MW12; 1T,N**
 A continuation of CSC 148F. The applications of computers to various problems. Elementary numerical methods. Representation and manipulation of graphs. Some techniques of data processing. Construction and validation of computer simulation models. Other non-numerical applications.
Exclusion: CSC 118S
Pre-requisite: CSC 148F
 SDS () SES () WDS (x) WES () NCO ()
- CSC 228S Programming Techniques for Data Processing 2L,MW10; 1T,N**
 Decision tables, if-applicable programming, tabling techniques, table-oriented logic and debugging, modular programming, modular design, program extensibility, COBOL programming.
Pre-requisite: CSC 158S
 SDS () SES () WDS (x) WES () NCO ()
- CSC 248S Programming Languages 2L,MW11; 1T,N**
 The syntax, semantics, and history of various programming languages, including algebraic, symbol manipulation and list processing languages. Control and data structures. Programme correctness.
Pre-requisites: CSC 158S
 SDS () SES () WDS (x) WES () NCO ()
- CSC 258F Computer Organization 2L,MW11; 1T,N**
 Computer structures, machine languages, instruction execution, addressing techniques, and digital representation of data. Computer system organization, memory storage devices, survey of logic design and micro programming. Some case studies of actual machines to illustrate various computer architectures.
Pre-requisites: CSC 158S
 SDS () SES () WDS (x) WES () NCO ()
- CSC 336S Numerical Methods 2L,N; 1T,N**
 Linear systems of equations, interpolation and approximation, non linear equations, quadrature, ordinary differential equations. The emphasis will be on the use of numerical methods for the computer solution of such problems.
Co-requisite: MAT 224F/225
 SDS () SES () WDS (x) WES () NCO ()
- CSC 348F Introduction to Applied Algebra 2L,MW2; 1T,N**
 A study of the structures of modern algebra with a view to their applications to computer science. Relations, functions, their representations by graphs, matrices and diagrams; semigroups; lattices, Boolean algebras; the minimization problem for Boolean polynomials; the design of sequential networks; universal algebra and its application to modern algebra and automata.
Pre-requisites: MAT 224ES, MAT 234/235/239E
Exclusion: MAT 229E
 SDS () SES () WDS (x) WES () NCO ()

- CSC 356EF** **Topics in Data Processing and Information Structures** 2L,N; 1T,N
 Searching and sorting algorithms, retrieval and update algorithms. The representation and application of data structures in these and other algorithms. Management information systems.
Exclusions: CSC 334F, 378F
Pre-requisites: CSC 228S, 248S, 258F
 SDS () SES () WDS (x) WES () NCO ()
- CSC 364S** **Introduction to the Theory of Computation** 2L,MW1; 1T,N
 Introduction for formal logic — propositional and predicate calculus. Primitive recursive functions, computable functions, recursive functions, and recursive sets. Turing machines, unsolvable problems. Models, flowcharts, and program schemata; application to equivalence, termination and correctness of programs.
Exclusion: CSC 438F
Pre-requisite: CSC 348F/MAT 345/MAT 229E (Not offered 1975-76)
 SDS () SES () WDS (x) WES () NCO ()
- CSC 368S** **Language Processors** 2L,1T
 Formal description and classification of programming languages. Specification of syntax. The parsing problem. Top-down and bottom-up parsing. Precedence methods. Attaching semantics to syntax. Translator writing systems.
Exclusion: CSC 344S (as in 1974-75 calendar)
Pre-requisite: CSC 356EF
 SDS () SES () WDS () WES () NCO (x)
- CSC 499Y** **Independent Work in Computer Science**
 A student should select his topic and advisor before the start of the year, and discuss the topic with the advisor.
Pre-requisite: Acceptance by an advisor
 SDS () SES () WDS (x) WES () NCO ()

DRAMA

Faculty Advisor: J. Astington

Practical exploration of drama involves two related efforts of the imagination and intelligence: the understanding of the dramatist's or director's work in the play, and personal interpretation and creation of these effects in acting. The courses in drama given at Erindale deal with both these areas, and should appeal either to specialists in literature wishing to broaden their understanding of drama, or to students interested primarily in their own vocal and physical creativity, and its development.

- DRA 100E** **European Drama** 1L,N; 1T,N
 Introduces the student to major non-English works of western drama in the context of the development of dramatic theory and the history of the theatre. The course will consist of reading and discussion of about twenty plays by the following: Aeschylus, Sophocles, Euripides, Aristophanes, Terence, Seneca, Lope de Vega, Molière, Racine, Goldoni, Goethe, Chekhov, Ibsen, Pirandello, Lorca, Brecht, Ionesco, Genêt. *D. Trott*
 SDS () SES () WDS (x) WES () NCO ()

Basic areas of acting technique in speech and movement; problems of portrayal of character; phenomenal of material communication (acting to actor, actor to audience, and "feedback") and technique over their control. Students will be expected to participate in public productions and to prepare for classes as for rehearsal (line learning, research). Enrolment limited. *J. Astington*

SDS () SES () WDS (x) WES () NCO ()

Detailed work on acting technique and the interpretation of the play text. Students will be expected to work on their own to a considerable extent, in preparation of scenes for group discussion, and to work on productions arising from the course. The work of DRA 200E will be continued in a more advanced and intensive way. *J. Astington*

Pre-requisite: DRA 200 or equivalent. Enrolment limited

SDS () SES () WDS () WES () NCO (x)

ECONOMICS

Faculty Advisor: Professor M. J. Hare

Economics is a social science; that is, it is an exploration of the behaviour of people in society. It has a strong influence on the structure, well-being and development of a society. More specifically, Economics studies the ways in which the resources of a country (capital, labour, land and natural resources) are allocated between industries to efficiently produce the range of goods and services provided in the country each year. The decisions of what to produce, of production methods, and how to distribute the goods and services provided must be made in each country irrespective of the political organization of the government in that country. Allocative decisions are made according to traditional patterns and customs; by government decree, policies and planning, and finally by the allocative mechanisms inherent in the price system.

At the aggregate level Economics considers such problems as the excessive levels of unemployment and inflation in the Canadian economy, and analyzes policies which can mitigate these burdens. The study of Economics also assesses the fairness of the tax burden, and the degree to which government spending can be justified. At a more micro or disaggregated level, economic analysis considers the determination of economic efficiency in different types of industry (e.g. oligopoly, and pure competition); the impact of anti-trust regulations, and the determination of prices of both outputs and inputs through the forces of supply and demand. Economic assessments of international trade patterns, tariffs and the consequences of foreign direct investment are also integral.

In addition, economic analysis focuses on such issues as pollution, poverty, the rate of economic growth and urbanization, regional disparities and custom unions, topics which are ubiquitous in today's Canadian newspapers.

The course sequence in Economics at Erindale is intentionally designed to accommodate the interests of both students who wish to specialize in this discipline, and concomitantly, to those who wish a broader assessment.

Students who wish to concentrate in Economics may proceed into the Four Year "Specialist programme" in Economics; into the Programme in Commerce and Finance, an internationally acknowledged joint major in Commerce and Economics which is offered at Erindale College, or into the "specialist programme" in Economics and Political Science. A "Minor" programme in Economics is also available.

Students frequently engage in joint majors in of Economics and History, Geography, Mathematics and Sociology. A sequence in Economics is also suitable for those concentrating in the physical sciences.

The Four Year "specialist programme" in Economics requires at least eight full courses in Economics plus one each in Statistics and Mathematics. At Erindale, "specialists" must take *all* of the following during their second, third, and fourth years: ECO 200; ECO 202; ECO 220/STA 242; ECO 326F and 325S; ECO 322; at least one full course in Economic History. Students who wish to be "specialists" should have attained a "B" average in their courses in Economics in Second Year and must register with the Faculty Advisor at Erindale at the start of their Third Year.

The "specialist programme" in Economics and Political Science requires standing in seven full courses in Economics and six full courses in Political Science. Erindale students should enrol annually with the Faculty Advisor in Economics or Political Science and must include: ECO 100; ECO 200; ECO 202; ECO 322; a course in Economic History and two additional courses in Economics; POL 100; POL 202E; two of POL 101, 200, 300 and two additional courses in Political Science (one course from two of five fields).

The Minor programme in Economics for Erindale students requires standing in at least six full courses in Economics. Students must include the following in their programme: ECO 100; ECO 200; ECO 202; at least three additional courses in Economics.

Students who concentrate in Economics frequently continue into graduate work in Business or Economics, or proceed into Law, Chartered Accountancy and many other areas of industry and government. Scientists, doctors, musicians and even potential astronauts who have been exposed to a series of courses in Economics develop a more sophisticated comprehension of the principal economic issues which confront society. Concomitantly those who have been exposed to a hard-core diet of rigorous economic analysis will find that it enhances their decision-making processes.

First year preparation includes ECO 100 (Introduction to Economics) and for the "specialists" either MAT 134 or MAT 130 depending upon the student's high school attainment and aptitude in mathematics.

ECO 100 Introduction to Economics

3L,M10-12, W11/W10,F10-12/MWF11/1/TR3-4:30/W7-9:30; 1T,N

A survey course with emphasis on the basic concepts in macro and micro economic theory; international trade and the techniques economists use to analyse problems. The concepts introduced will include: national income and its determination; monetary and fiscal techniques; business cycle determination; the derivation and use of supply and demand schedules; the theory of the firm and principles of comparative advantage and tariff protection. *R. Wintrobe, F.J. Reid, J. E. Pesando, M. J. Hare*

SDS () SES (x) WDS (x) WES (x) NCO ()

ECO 200 Micro Economic Theory

2L,N; 1T,N

An intermediate treatment of the basic tools of economic analysis with applications to a wide variety of economic problems in the area of pricing, resource allocation, income distribution, and welfare economics. *J. E. Floyd, T. J. O. Dick*

Pre-requisite: ECO 100

Exclusion: ECO 261E

SDS () SES () WDS (x) WES () NCO ()

ECO 201E Modern European Economic History

2L,N

The economic development of modern Europe, with emphasis on the industrialization process and agrarian change in major European countries with concentration

on the period from 1750 to 1914. *S. M. Eddie/J. H. Munro*

Co-requisite: ECO 100

SDS () SES () WDS (x) WES () NCO ()

ECO 202E Macro-Economic Theory 2L,MW1/N/M7-9; 1T,N

A detailed discussion of the theory of output, employment and the price level; of the techniques available for achieving economic stability; of central banking and Canadian financial institutions and markets, and of foreign-exchange markets. 261E. *J. E. Pesando, J. A. Hynes*

Pre-requisite: ECO 100

Exclusion: ECO 261E

SDS () SES () WDS (x) WES (x) NCO ()

ECO 220E Quantitative Methods in Economics 2L,N; 1T,N

An introduction to the use of statistical analysis, including such topics as elementary probability theory, sampling distributions, tests of hypothesis, estimation; analysis of variance and regression analysis. Emphasis is placed on applications in economics and business problems. *T. J. O. Dick*

Pre-requisite: ECO 100 and MAT 134/130

Exclusion: STA 202EF, 212ES, 242, GGR 202F, PSY 200F

SDS () SES () WDS (x) WES () NCO ()

ECO 221E North American Economic History and Development 2L,N

An examination of the evolving patterns of economic development in North America. Comparative study of the growth experience of the major sectors will be undertaken with the objective of explaining leads and lags in these sectors.

Pre-requisite: ECO 100

SDS () SES () WDS (x) WES () NCO ()

ECO 260ES The Economics of Environmental Deterioration 2L,M3-5

An analysis of the misallocation of resources caused by different types of pollutants. The course will stress both economic analysis and case studies. *M. J. Hare*

Pre-requisites: ECO 100 and P.I.

SDS () SES () WDS (x) WES () NCO ()

ECO 261E Contemporary Canadian Economic Issues 2L

Offers students an insight into the economics of various public issues from a global and specific point of view. In the process the student will increase his understanding of the decision-making process, as well as the government impact on the structure of the Canadian economy. The course will focus on a series of contemporary economic issues, among them: the position of the multi-national corporation, anti-trust policy, regional development programmes, hard-core unemployment and manpower training, ecology versus economic growth, urbanization, poverty and income support plans, the provision of medical services, and inflation-unemployment trade-offs.

Pre-requisite: ECO 100

Exclusion: ECO 200/202E

SDS () SES () WDS () WES () NCO (x)

ECO 322E History of Economic Thought 2L,N

After a brief summary account of scholastic and mercantilist economics, the lec-

tures will trace in some detail the development of analytical economics from the eighteenth century with special emphasis upon the work of the Physiocrats; Adam Smith; the British Classical School (particularly T. R. Malthus, David Ricardo, and J. S. Mill); the "marginalists" (particularly W. S. Jevons, C. Menger and L. Walras) and Marx. Later developments will be examined if time permits. A number of methodological issues are raised, particularly the relationship between economic events and economic theory, and the question of "bias" in economics.

D. Pokorny

Pre-requisites: ECO 200 and ECO 202

SDS () SES () WDS (x) WES () NCO ()

ECO 324E Economic Development 2L

Emphasis is on the economic conditions of low-income countries and the prospects of their economic transformation. Frequent reference will be made to specific issues affecting the nations of Africa, Asia and Latin America. *M. J. Hare*

Pre-requisites: ECO 200 and 202E or P.I.

SDS () SES () WDS () WES () NCO (x)

ECO 325F Advanced Economic Theory — Macro 2L,N

To develop analytical skills in constructing and solving macro-economic models with particular reference to the Canadian economy. *J. A. Hynes*

Pre-requisites: ECO 202 and MAT 134 (or equivalent) or P.I.

SDS () SES () WDS (x) WES () NCO ()

ECO 326S Advanced Economic Theory — Micro 2L,N

Focuses on theories and techniques of decision-making by firms and households. It examines the problem of measuring economic welfare, and the merits and shortcomings of the market mechanism in promoting it. *M. A. Fuss*

Pre-requisite: ECO 200 and MAT 134 (or equivalent) or P.I.

SDS () SES () WDS (x) WES () NCO ()

ECO 328 International Economics and Policy 2L,N

An analysis of the nature, effects and policy implications of international trade and finance. The theories of comparative costs and reciprocal demand; factor reward equalization; balance of payments and foreign exchange; international tariffs; liquidity; customs unions; and relevant topics related to current problems in international economic affairs. *J. A. Hynes*

Pre-requisites: ECO 200 and 202E

SDS () SES () WDS (x) WES () NCO ()

ECO 336E Canadian Public Finance 2L,N

The construction of an economic theory of government to explain the determination of the budget and to provide an economic rationale for government intervention; an analysis of changing patterns of expenditure and revenue of federal and provincial governments; the development of criteria for the evaluation of expenditure programmes and the tax structure; the problems and techniques of fiscal stabilization. *R. Wintrobe*

Pre-requisites: ECO 200 and ECO 202E

SDS () SES () WDS (x) WES () NCO ()

- ECO 351EF Monetary Economics 2L**
Detailed examination of monetary economics with emphasis on policy implications. Topics include: the Monetarist and Neo-Keynesian views of the transmissions mechanism; targets and indicators of monetary policy; foreign-exchange considerations, and rules versus discretion in monetary policy. *J. E. Pesando*
Pre-requisite: ECO 202E or P.I.
SDS () SES () WDS () WES () NCO (x)
- ECO 352E Industrial Organization 2L,TR9**
Examines the allocative implications of market failure and the nature of oligopolistic and imperfectly competitive markets. Some emphasis will be placed on the Canadian anti-combines policy and the industrial implications of Canadian tariff policy. *M. A. Fuss*
Pre-requisite: ECO 200
SDS () SES () WDS (x) WES () NCO ()
- ECO 360E Economic Transformation and Technological Change 2L,W3-5**
An analysis of secular growth patterns in the industrial countries with emphasis on technological change and productivity increases. *M. J. Hare*
Pre-requisite: ECO 200 and 202E
SDS () SES () WDS (x) WES () NCO ()
- ECO 361ES Labour Economics and Labour Relations 2L,N**
A continuation of Economics 326EF. Examines the economic aspects of trade unions and the effect of collective bargaining on earnings. Relationships between labour market conditions and the size of wage bargains are studied. The determinants of wage differentials and government manpower and educational policies are also considered. *S. A. Rea*
Pre-requisite: ECO 362EF/S
SDS () SES () WDS (x) WES () NCO ()
- ECO 362EF Economics and the Labour Market 2L,N**
The supply and demand for labour, labour mobility, patterns of unemployment and the operation of labour markets are analyzed.
Pre-requisite: ECO 200
SDS () SES () WDS (x) WES () NCO ()
- ECO 364EF The Economy of the U.S.S.R. — I 2L,N**
Begins with a history of the Soviet economy. It then analyzes the main economic institutions and policy instruments (planning, industrial organization, fiscal and monetary policy, price policy) and surveys some important economic and functional sectors such as agriculture, industry, transportation, labour, and consumption. Finally, we study the major attempts to measure Soviet performance and consider the important problems facing the economy today.
Pre-requisites: ECO 200 and 202E
SDS () SES () WDS (x) WES () NCO ()
- ECO 365ES The Economy of the U.S.S.R. — II 2L,N**
Description same as ECO 364EF.
Pre-requisite: ECO 364EF
SDS () SES () WDS (x) WES () NCO ()

- ECO 366E Agriculture and Economic Growth: Theory, History, Policy 2L; 1T**
 The role of agriculture in economic growth, including analysis of models of agricultural development and land tenure and their effects on overall economic growth. Case studies to be drawn primarily from experience of European and East and Southeast Asian countries. *S. M. Eddie*
Pre-requisite: ECO 200 or P.I.
 SDS () SES () WDS () WES () NCO (x)
- ECO 368EF Economics of Poverty 2L,N**
 Economic influences on the extent of inequality and poverty in Canada will be examined. These will include aggregate income levels, unemployment, inflation, regional development, education, low wage employment, and discrimination. Canadian policies that affect the incidence of poverty are evaluated, and proposed programmes are critically analyzed. *S. A. Rea*
Pre-requisite: ECO 200 or P.I.
 SDS () SES () WDS (x) WES () NCO ()
- ECO 400 A Reading Course for Specialists**
 Admission only by permission of the Faculty of Economics.
 SDS () SES () WDS (x) WES () NCO ()
- ECO 423 Senior Seminar in Economics**
 (Open only to students in the Specialist Programme in Economics.) Students will do a major research paper under the supervision of a member of the staff and must enrol with the Discipline Representative in Economics at Erindale.
Pre-requisite: P.I.
 SDS () SES () WDS (x) WES () NCO ()

ENGLISH

Faculty Advisor: Professor R. Van Fossen

The Department of English offers an exceptionally wide range of courses. Whether the individual course is designed to provide a knowledge of one author's production or to focus attention upon major genres and the variety of critical approaches to them, or to survey an entire period, the underlying concern is to preserve and illuminate a distinguished literary tradition.

Courses are arranged in four series, a gradation which denotes the level of mutual expectation in the classroom and does not necessarily suggest alignment with the year in which the student is enrolled. Thus, courses in the 100 series are introductory; the 200 series provides a further selection of courses at an intermediate level; and more advanced courses appear in the 300 and 400 series. Because minimal prerequisites are required for courses beyond the 100 series, students in other disciplines have a wide variety of courses to choose from.

The Specialist Programme outlined under suggested Programmes of Study is conceived not so much to cover a prescribed body of material as to provide the student with the opportunity to become acquainted with the widest possible variety of authors and critical approaches, as well as with the literature at different periods in its history. It should not be assumed that the Specialist Programme is designed primarily for entrance into graduate school. The student contemplating further degrees should consult his instructors about the requirements of various graduate schools,

and make provision in his programme for the customary language requirements. Similarly, the student who is considering a teaching career in Ontario should consult the Faculty of Education for the requirements for Type-A certification.

The student who desires information beyond what is set forth in this Calendar may obtain brochures from the various colleges. These describe the content of courses in fuller detail and supply lists of tests suggested by the individual instructors. Counselling is available from the Academic Secretary as well as from other members of the English faculty.

Note: First-year students are strongly advised to register for no more than two courses in English.

The following courses are offered in alternate years: ENG 130, 200, 204, 302, 304, 322 and 354.

Courses open to first- and second-year students and to students in higher years who have had no more than one previous course in English.

The 100-series courses are designed to introduce students to English studies at the university level and to develop their skills in critical reading and writing. The range of subject matter is broad, but all courses have certain aims and methods in common. Each course will include works of poetry, fiction or drama; while these materials will be studied as individual literary achievements and in their relation to the general subject matter of the particular course, they will also serve to familiarize students with different literary forms and a variety of critical approaches. Each course will also be concerned to encourage the close and careful reading of literary texts and to provide an opportunity for students to develop their writing abilities.

ENG 108 Forms of Twentieth Century Literature 3L, MWF9/10/11/M7-9

At least twelve and no more than fifteen works by twentieth-century authors, including works by at least three novelists, three poets and three dramatists. These shall include works by at least six of the following authors: Conrad, Faulkner, Joyce, Lawrence, Woolf; Auden, Eliot, Frost, Stevens, Yeats; Albee, Beckett, O'Neill, Pinter, Shaw.

SDS () SES (x) WDS (x) WES (x) NCO ()

ENG 112 Major British Writers 3L, MWF10

A study of major figures from the medieval to the modern period; selections from: Chaucer, Spenser, Shakespeare's non-dramatic poetry, Donne, Milton, Dryden or Pope, Swift or Johnson, Wordsworth or Keats, Browning or Tennyson, Yeats or T. S. Eliot in *The Norton Anthology of English Literature*, one volume edition (revised). At least two plays and two novels, one of each before 1900. (Alternative or additional texts may be assigned by the instructor.)

SDS (x) SES () WDS (x) WES () NCO ()

ENG 140 Introduction to Poetry 3L

The aim of this course is to develop basic techniques for the critical reading and enjoyment of poetry. Poems in many forms and styles will be studied closely with particular attention given to elements of poetry such as diction, rhythm, form, metaphor, voice and versification.

SDS () SES () WDS () WES () NCO ()

ENG 150 American Literature 3L, MWF11/W7-9

An introductory survey of major works in American literature. At least twelve works to be selected, including at least six written before 1900. The following will

be studied early in the course: *Moby Dick*, *Huckleberry Finn*, *The Scarlet Letter*, Whitman, selected poems.

SDS () SES () WDS (x) WES (x) NCO ()

ENG 152

Canadian Literature in English

3L, MWF10/11/R7-9

An introductory survey of poetry, prose, and drama, including works by such authors as the following: Moodie, Lampman, Haliburton, Grove, Leacock, Pratt, Birney, Callaghan, MacLennan, Laurence, Layton, Munro, Ondaatje, Richler, Reaney, Cohen, Atwood.

SDS () SES () WDS (x) WES (x) NCO ()

ENG 165

English Literature: Forms and Approaches

3L, MWF1

The course will focus on particular works as representative of various *kinds* of literature (e.g. drama, poetry, novel), as well as on critical approaches that have been developed for gaining a fuller understanding of literary works (e.g. structural analysis, study of imagery, psychoanalytic analysis). Texts: Shakespeare, *Hamlet*; Congreve, *The Way of the World*; selections from the poetry of Marvell and Hopkins; one of More, *Utopia*, Browne, *Religio Medici* or another similar prose work; two of Emily Bronte, *Wuthering Heights*, Faulkner, *The Sound and the Fury* and Forster, *A Passage to India*. At least four more works will be chosen to extend the range of forms and make possible additional approaches. Readings in literary criticism will be assigned.

SDS () SES () WDS (x) WES () NCO ()

Courses open to second- and higher-year students and to first-year students who are taking at least one 100-series course in English.

ENG 200

Old English Language and Literature

3L

A study of the language, literature, and culture of the Old English period as represented principally in the surviving poetry. The first half focuses on developing fluency in the reading of Old English, concentrating on the grammar, syntax, and style of various pieces of prose and poetry. The second half of the course will be given over to the intensive study of further major texts in Old English literature. *J. Dutka*

SDS () SES () WDS () WES () NCO (x)

ENG 206

English Literature of the Renaissance

3L, MWF9

Poetry: Sidney, Spenser, Shakespeare, Donne, selected poems; Spenser, *The Faerie Queene*, selections; selected poems by at least three of Jonson, Herrick, Herbert, Marvell, Vaughan and Milton (minor poems); Milton, *Paradise Lost* (selections). Drama: Three non-Shakespearean plays; Shakespeare, two plays. Prose: at least three of Sidney, *Apology for Poetry*, Bacon, Donne, Milton, Browne. Background Reading: Two or more of More, *Utopia*, Erasmus, *Praise of Folie*, Machiavelli, *The Prince*, Castiglione, *The Courtier* (trans. Hoby) and Montaigne, *Essays* (trans. Florio).

SDS () SES () WDS (x) WES () NCO ()

ENG 207

Nineteenth-Century English Literature

3L

Selected works of twelve writers illustrating the nature and range of English poetry, fiction, and prose in the nineteenth century. At least four authors will be chosen

SDS () SES () WDS () WES () NCO (x)

3L, MWF12/T7-9

SDS () SES () WDS (x) WES (x) NCO ()

3L.N

SDS () SES (x) WDS (x) WES () NCO ()

3L, MWF11/1

SDS () SES () WDS (x) WES () NCO ()

3L,MWF2

SDS () SES () WDS (x) WES () NCO ()

3L.N

SDS () SES () WDS (x) WES () NCO ()

An investigation of *Concrete's* substitution of visual for verbal syntax and spatial for temporal rhythm, and hence a study of words with the attributes of embodied things — mass, texture, colour, duration, location.

Lectures and seminars will trace the flowering of this new genre back to its roots in Dada and other 20th century avant-garde movements, and show its affinities with rune and hieroglyph. In addition there will be workshops for experimenting with language in various concretizations.

Working largely from anthologies such as M. E. Solt, *Concrete Poetry* and E. Williams, *An Anthology of Concrete Poetry*, the course will study such contemporary Canadian poets as Birney, Bissett, Nichol; contemporary American and English poets; and their precursors such as Joyce, Schwitters and Stein.

SDS () SES () WDS (x) WES () NCO ()

Courses open to second- and higher-year students.

ENG 302**English Poetry and Prose, 1500-1600****3L**

Poetry: Selections from the poetry of Wyatt and Surrey, Sidney, Marlowe, Shakespeare, Spenser (including *The Faerie Queene*, Book I, at least two other books, and the *Mutabilitie Cantos*) and Donne. Other poets may be added. Prose: More, *Utopia*; Sidney, *Defence of Poesy*. Selections from at least two of the following writers: Elyot, Ascham, Haykluyt, Hooker, Lyly, Sidney (*Arcadia*), Nashe and Deloney. Additional reading from the following: Erasmus, *Praise of Folly*; Castiglione, *The Courtier*; Machiavelli, *The Prince*; Ariosto, *Orlando Furioso*.

Pre-requisite: one previous course in English

SDS () SES () WDS () WES () NCO (x)

ENG 304**English Poetry and Prose, 1600-1660****3L,N**

Selected poetry of Donne, Jonson and their successors; Milton. Prose by such writers as Bacon, Browne, Burton, Milton, Traherne.

Pre-requisite: one previous course in English

SDS () SES () WDS (x) WES () NCO ()

ENG 306**English Poetry, Prose and Drama, 1660-1800****3L, MF2,W2**

Selections from the works of at least ten of the following: Addison, Boswell, Burke, Burns, Butler, Collins, Congreve, Cowper, Defoe, Dryden, Gay, Gibbon, Goldsmith, Gray, Halifax, Johnson, Pepys, Pope, Prior, Rochester, Sheridan, Smart, Steele, Swift, Thomson, Horace Walpole, Wycherley, Young.

Pre-requisite: one previous course in English

SDS () SES () WDS (x) WES () NCO ()

ENG 308**Romantic Poetry****3L,N**

Blake, Wordsworth, Coleridge, Byron, Shelley, Keats for special study; brief selections from other poets of the period such as Crabbe, Scott, Landor, Clare; Selections from relevant prose works of the period.

Pre-requisite: one previous course in English

SDS (x) SES () WDS (x) WES () NCO ()

- ENG 312 Chaucer 3L, MWF4/T7-9**
Troilus and Criseyde; selections from the *Canterbury Tales*; further selections from Chaucer's work.
Pre-requisite: one previous course in English
 SDS () SES () WDS (x) WES (x) NCO ()
- ENG 322 Fiction before 1832 3L,N**
 At least twelve works, including one or more by each of Richardson, Fielding, Sterne, Jane Austen and Scott. Three of the works will be: Richardson, *Pamela*, Fielding, *Tom Jones*, and Sterne, *Tristram Shandy*.
Pre-requisite: one previous course in English.
 SDS () SES () WDS (x) WES () NCO ()
- ENG 324 Fiction, 1832-1900 3L, MWF11**
 At least twelve works, including one or more by each of Dickens, Thackeray, Trollope, Emily Brontë, George Eliot and Hardy.
Pre-requisite: one previous course in English
 SDS () SES () WDS (x) WES () NCO ()
- ENG 328 Fiction, 1900-1950 3L, MWF3**
 At least twelve works, including one or more by each of James, Conrad, Joyce, Lawrence and Faulkner.
Pre-requisite: one previous course in English
 SDS () SES () WDS (x) WES () NCO ()
- ENG 332 English Drama to 1642 3L,MWF1**
 Examples of the miracle play, the morality play, the Tudor interlude, early Tudor and Elizabethan tragedy, comedy and romance; Marlowe: two or more plays; Shakespeare: at least seven of the following: *Love's Labours Lost*, *Richard III*, *Much Ado About Nothing*, *As You Like It*, *Troilus and Cressida*, *Othello*, *Macbeth*, *King Lear*, *Coriolanus*, *The Winter's Tale*; two plays by Jonson, and a selection of works by at least six other Jacobean dramatists.
Pre-requisite: one previous course in English
 SDS () SES () WDS (x) WES () NCO ()
- ENG 338 Modern Drama 3L,MWF10**
 A minimum of twenty representative modern plays including one or more by at least five of the following: Chekhov, Shaw, Synge, Yeats, O'Casey, O'Neill, Eliot, Beckett, Pinter.
Pre-requisite: one previous course in English
 SDS () SES () WDS (x) WES () NCO ()
- ENG 346 Victorian Poetry 3L,N**
 The poetry of Tennyson, Browning, Arnold for special study: selections from such poets as FitzGerald, Clough, D.G. Rossetti, C. Rossetti, Morris, Swinburne, Hopkins, Meredith, Hardy, Housman. Selections from the critical writing of Browning, Arnold, Clough, Swinburne, Meredith, Housman may be added.
Pre-requisite: At least one course in English
 SDS () SES () WDS (x) WES () NCO ()

- ENG 348 Modern Poetry 3L, T7-9**
 Hopkins, Yeats, Pound, Eliot, Stevens and other poets.
Pre-requisite: one previous course in English
 SDS () SES () WDS (x) WES () NCO ()
- ENG 351 Topics in American Literature 3L**
 A study of one or more special topics in American literature, e.g., thematic, stylistic, or theoretical approaches; genre studies; detailed studies of particular periods or literary movements; the relationships between American writing and American social and intellectual history.
 SDS () SES () WDS () WES () NCO (x)
- ENG 354 Canadian Poetry 3L,N**
 A minimum of fifteen poets from the nineteenth and twentieth centuries, at least nine of which to be chosen from the following: Crawford, Carman, Lampman, D. C. Scott, Pratt, F. R. Scott, A.J.M. Smith, Birney, Klein, Livesay, Layton, Avison, Purdy, Souster, Reaney. French-Canadian poetry in translation may be included.
Pre-requisite: one previous course in English
 SDS () SES () WDS (x) WES () NCO ()
- ENG 369 Seminar in Writing 3L,N**
 Restricted to students who, in the opinion of the Department of English, show special aptitude for writing. Admission at the discretion of the Instructor.
J. Skvorecky
Pre-requisite: one previous course in English
 SDS () SES () WDS () WES () NCO (x)
- ENG 390 Individual Studies**
 A scholarly project chosen by the student and supervised by a member of staff of the student's own college. The form of the project and the manner of its execution will be determined by the student in consultation with the supervisor. All project titles must be approved by a committee of the Combined Departments of English at the time of spring pre-registration in the previous year. Application forms are available from the Secretary of the Combined Departments of English.
Pre-requisite: three previous courses in English
 SDS () SES () WDS () WES (x) NCO ()

Courses open to third- and higher-year students.

- ENG 415 Studies in Restoration and Eighteenth-Century Literature**
Pre-requisite: Normally B-standing or better in at least three courses in English.
 SDS () SES () WDS () WES () NCO (x)
- ENG 417 Studies in Nineteenth-Century Literature 3L,N**
Pre-requisite: Normally B-standing or better in at least three courses in English, one of which must be 207/308/324/346/368.
 SDS () SES () WDS (x) WES () NCO ()

- ENG 419** **Studies in Twentieth-Century Literature** **3L,N**
Pre-requisite: Normally B-standing or better in at least three courses in English
 SDS () SES () WDS (x) WES () NCO ()
- ENG 466** **Comprehensive Examinations**
 For description consult Departmental brochure.
Pre-requisite: Normally *three* previous courses in English with at least "B" standing in *each* course.
 SDS () SES () WDS (x) WES () NCO ()
- ENG 467** **Seminar in Literary Theory and Practice** **3L**
 For description consult Departmental brochure.
Pre-requisite: Normally *three* previous courses in English with at least "B" standing in *each* course.
 SDS () SES () WDS () WES () NCO (x)
- ENG 469** **Senior Essay**
 A scholarly project, chosen by the student, approved by the college department, and supervised by one of its instructors.
Pre-requisite: Open to fourth-year students only, who have at least "B" standing or better in at least three courses in English.
 SDS () SES () WDS (x) WES () NCO ()

EARTH AND PLANETARY SCIENCE **(Geology and Geophysics)**

Faculty Advisors: H. C. Halls, M. M. Kimberley, G. W. Pearce, P.-Y. F. Robin, R. Stesky

Although most natural scientists usually study phenomena occurring on Earth, the earth scientist is more specifically concerned with the solid Earth. A traditional object of his work is the search for rocks and minerals of economic value. The mining and petroleum industries of Canada which are among the countries largest have always been major employers and are continuing to expand. Increasing pollution, shrinking energy resources, and a growing awareness of such hazards as earthquakes and volcanoes have recently stimulated greater interest in our physical environment and in methods of controlling it. In addition newly acquired knowledge of continental evolution as well as exploration of the moon and other planets provide us with new insights into the behaviour and history of the Earth.

A career in earth science may lead to travel in many parts of the world and to work in a wide variety of conditions. Laboratory studies which complement the field work often require the use of sophisticated analytical instruments.

To meet the traditional as well as more recent needs, Erindale offers a broad spectrum of courses in Earth and Planetary Science. Two different streams are outlined below for students wishing to obtain specialist degrees. The programs are divided into Geology and Geophysics; the former encompasses all aspects of earth science, with a chemical or biological bias, while the latter is concerned with the physics of the Earth. Course options are arranged so that a student can defer choice between Geology and Geophysics until the third year if he so wishes. The most flexible choice is obtained if specialists take several courses in Physics, Chemistry and Mathematics in their

first two years. Intending specialists are advised to adhere closely to the specialist program, particularly in the basic science requirement, to ensure acceptance in St. George Campus courses in their final year. At least 4½ basic science courses (including a ½ in Computer science) must be completed by specialists by the end of their third year. For those students not intending to specialize a minor program in Earth and Planetary Science is also outlined.

Many of the courses in Earth and Planetary Science can be taken to supplement the Environmental Geography and Survey Science programs which offer a wide selection of courses in conservation, environmental management, remote sensing and surveying.

All students who specialize or who take many of their courses in Earth and Planetary Science are assigned to a Faculty Advisor whose role is to guide and supervise the student's program of study.

Specialist Programs in Geology and Geophysics

Geology

Number of specified courses: 13½ (4½ basic science; 9 Geology)

- Year I EPS 120, CHM 150E/118E plus three options. Recommended courses: MAT 135E, PHY 110E/135E, CSC 108F, 118S, BIO 100E
- Year II EPS 220, EPS 225, CHM 220E/BIO 230E, EPS 235/PHY 230E/BIO 251E plus one option or PHY 110E/135E if not taken in the first year.
Recommended courses: MAT 239E/APM 251E, CHM 230ES, CHM 280Ef, PHY 230E, CHM 220E, BIO 251E, EPS 235, STA 242, CSC 108F, CSC 118S.
An additional compulsory field camp is held at the end of the spring term.
- Year III EPS 321, EPS 322+332S, EPS 345F, EPS 355S/EPS 370S, plus two options.
Recommended courses: EPS 337F, EPS 338S, EPS 365F, EPS 355S, EPS 370S, GGR 376F, CHM 320E, BIO 250E, GLG 330F*
(*a St. George Campus course)
An additional compulsory field camp is held at the end of the spring term.
A half course in Computer Science (CSC 108F/CSC 148F) must be completed by the end of the third year.
- Year IV At least three courses from EPS/GLG 300 and 400 series, of which at least two must be from the 400 series. With the exception of EPS 400, all remaining geology 400-series courses are held on the St. George Campus, but tutorials to assist students will be offered by the Erindale staff.

Geophysics

Number of specified courses: 13½ (4½ basic science, 9 Geology/Geophysics)

- Year I EPS 120, PHY 110E/135E, plus three options. Recommended courses: MAT 135E/MAT 139E, CHM 150E/118E, CSC 108F, CSC 118S, AST 100, SUR 300.
- Year II EPS 220, EPS 235, PHY 230E plus two options, one of which must be CHM 150E/118E if not taken in the first year. Recommended courses: MAT 239, APM 251E, EPS 225, CHM 220E/PHY 254E, CSC 108F, CSC 118S, CHM 230ES, CHM 280EF. An additional compulsory field camp is held at the end of the spring term.
- Year III EPS 321/PHY 243E, EPS 322F, EPS 332S, EPS 337F, EPS 338S, plus one option.
Recommended courses: PHY 211E, PHY 254E, PHY 352E/PHY 355E, APM 351E, GGR 373E.
A half course in computer science (CSC 108F/CSC 148F) must be completed by the end of the third year.

Year IV At least three courses from EPS/GLG/PHY 300 and 400 series courses, of which at least two must be from the 400 series. With the exception of EPS 400, all remaining 400 series courses in geology and geophysics are held on the St. George campus, but tutorials to assist students will be offered by the Erindale staff.

Minor program in Earth Planetary Science

Number of specified courses: 8 (2 basic science, 6 Geology)

Students must complete at least 6 courses in EPS and two designated courses: MAT 135E and any one of CHM 150E/118E, PHY 110E/135E, BIO 100E.

Suggested sequence:

Year I EPS 120, plus MAT 135E.

Year II EPS 220, EPS 235/EPS 225. Plus one of CHM 150E/CHM 118E/PHY 110E/PHY 135E

Year III & IV At least three courses from EPS/GLG 300 and 400 courses.

EPS 100F The Restless Earth 3L, MW10; 1T,N

A course for students in Humanities and Social Science who are interested in how some of the Earth's most spectacular natural features have been formed. Discussion will focus on the Earth's behaviour and evolution through examination of geological processes which have maintained the Earth in a continual state of unrest throughout its history — a history that spans more than 4 billion years. Topics include: Geological scales in time and space; space exploration and its bearing on the origin of the Earth and Moon; continental drift and the making of mountains, continents and oceans; the origin and evolution of life. *R. Stesky and staff*

Exclusion: EPS 120

Pre-requisite: None

SDS () SES () WDS (x) WES () NCO ()

EPS 110S Man And The Earth 2L, MW10; 1T,N

A course for students in Humanities and Social Science, which emphasizes the impact of natural earth processes on human activity. Topics include: A history of geological thought; the origin of man; the Great Ice age; natural disasters, past and present; Geology and the quest for ancient cultures; Atlantis, fact and fiction; the search for oil and mineral wealth; gemstones, their occurrence and identification; solid waste disposal: the pollution of our environment. *R. Stesky and staff*

Exclusion: EPS 120

Pre-requisite: None

SDS () SES () WDS (x) WES () NCO ()

EPS 120 Introduction to Earth and Planetary Science 2L, MW10; 3P,N

An introduction for Science students to the study of planetary evolution and behaviour, through examination of the shape, motion and internal constitution of the Earth and Moon, and the physical and chemical processes that control their surface and internal characteristics.

The course places strong emphasis on field and laboratory work, and is recommended for anyone with a serious or peripheral interest in practical Earth Science.

M. M. Kimberley and G. W. Pearce.

Exclusion: EPS 100F, 110S

Pre-requisite: Gr. XIII Sci. and Mat. recommended.

SDS () SES (x) WDS (x) WES () NCO ()

- EPS 220** **Mineralogy (Formerly EPS 210E)** **2L,W12-2; 3P,N**
 Concerned with the study of minerals; their crystallography, physical and chemical properties, formation and occurrence and their recognition under the petrographic microscope. Approximately 80 species of ore and rock-forming minerals are described and examined in detail. Hand specimens of igneous, sedimentary and metamorphic rocks are also studied from a mineralogical view point.
D. H. Gorman
Pre-requisite: EPS 120
Pre or Co-requisite: CHM 150/118E
 SDS () SES () WDS () WES (x) NCO ()
- EPS 225** **Stratigraphy and Paleontology** **2L,T1F12; 3P,N**
 The evolution of plant and animal life, relative and absolute time and the principles of stratigraphy are examined.
Pre-requisite: EPS 120
 SDS () SES () WDS (x) WES () NCO ()
- EPS 235** **Physics and Chemistry of the Earth and Moon** **2L,TR11; 1T,N; 2P,N**
 Gravity, magnetism, acoustics, dynamics, electromagnetism and thermodynamics are applied to a study of the major external and internal features of the Earth and Moon. *G. W. Pearce and M. M. Kimberley*
Pre-requisite: PHY 110E/135E, EPS 120
 SDS () SES () WDS (x) WES () NCO ()
- EPS 240E** **Environmental Geology** **2L,F9-11; 2T,N**
 A survey course intended for students specialising in environmental science which evaluates the interaction between man's activities and geological processes. Topics include the monitoring, prediction and control of earthquakes, volcanism and destructive storms; slope stability, landslides and avalanches; man-made landforms and their physical effect; fluid withdrawal and land subsidence; underground storage and waste disposal, and the current status of non-renewable energy resources in Canada. *H. C. Halls*
Pre-requisite: GGR 173/171E/EPS 120
 SDS () SES () WDS (x) WES () NCO ()
- EPS 321** **Petrology** **2L, F12-2; 3P,N**
 Uses hand-specimens and microscope petrography in the description, classification and interpretation of sedimentary, igneous and metamorphic rocks. *J. Gittins, J. B. Currie, P.-Y.F. Robin*
Pre-requisite: EPS 210E/EPS 220, CHM 150/118E
 SDS () SES () WDS (x) WES () NCO ()
- EPS 322F** **Structural Geology I** **2L, TR9; 3P,N**
 An introductory study of past and present deformation in the Earth's crust. The course examines methods of describing and classifying rock structures such as folds and faults and surveys briefly the mechanical behaviour of rocks and minerals. The

development of structures such as shields, trenches and mountain chains is then examined within a global tectonic framework, using selected examples. *P.-Y. F. Robin, M. M. Kimberley*

Pre-requisite: EPS 120, EPS 220 or P.I.

SDS () SES () WDS (x) WES () NCO ()

EPS 332S Structural Geology II 2L, 3P,N

A continuation of EPS 322F with greater emphasis on strain analysis and the physics of rock deformation. The course discusses the dynamic interpretation and tectonic significance of rock fabrics, folds, joints, fractures and faults. Structures associated with emplacement of igneous rocks are also considered. *P.-Y F. Robin*

Pre-requisite: EPS 322F, PHY 110E/135E

SDS () SES () WDS (x) WES () NCO ()

EPS 335 Advanced Physics of the Earth 2L, MW11; 2T,N

A continuation of EPS 235 with particular attention to the structure and behaviour of the earth's interior as deduced by geophysical methods. *D. J. Dunlop, R. Stesky*

Pre-requisite: EPS 235

SDS () SES () WDS (x) WES () NCO ()

EPS 337F Exploration Geophysics I 2L,TR11; 3P,N
(Formerly EPS 310EF)

An introduction to the geophysical methods used in the search for mineral deposits. Basic principles, instrumentation, field procedures and elementary interpretation techniques, are outlined for gravity, magnetic and seismic methods. Practical work will emphasize field surveys. *H. C. Halls*

Pre-requisite: EPS 210E/220, PHY 110E/135E

SDS () SES () WDS (x) WES () NCO ()

EPS 338S Exploration Geophysics II 2L,TR11; 3P,N
(Formerly EPS 340ES)

A continuation of EPS 337F with emphasis on electrical and electromagnetic methods. Practical work consists of laboratory exercises and experiments designed to stimulate natural situations. For those students who have completed the course and EPS 337F a series of weekend field trips are available, arranged by the Geophysics Division on the St. George Campus, just prior to the beginning of the fall term. *H. C. Halls*

Pre-requisite: EPS 210E/220, PHY 110E/135E. Recommended preparation PHY 230

SDS () SES () WDS (x) WES () NCO ()

EPS 344F Physical Sedimentology and Hydrology 2L, 3P,N

Clastic sediment distribution and sedimentary structures are related to supply and fluid dynamics of transport. Groundwater flow through sediment is similarly modelled. *M. M. Kimberley, G. W. Pearce*

Pre-requisite: EPS 210E/220, PHY 110E/135E

SDS () SES () WDS (x) WES () NCO ()

EPS 345S Chemical Sedimentology 2L, MW12; 3P,N

Processes of weathering, chemical sedimentation and diagenesis are related to

theoretical geochemistry. Ranges of natural water compositions are estimated from equilibria among dissolved and precipitated species. The physical Chemistry of phase changes and crystal growth during diagenesis are examined.

M. M. Kimberley, P.-Y. Robin

Pre-requisite: EPS 210E/220, CHM 220E or P.I.

SDS () SES () WDS (x) WES () NCO ()

EPS 365F

Marine Geology

2L,R1,F9; 3P,N

(Formerly EPS 320ES)

The morphology, structure and evolution of the ocean basins are examined within a global tectonic framework. *R. Stesky*

Pre-requisite: EPS 210E/220

SDS () SES () WDS (x) WES () NCO ()

EPS 370S

Applied Paleontology

2L,T12,F9; 3P,N

(Formerly EPS 350ES)

Discusses the origin of life, evolution of the major fossil groups, paleoecology, functional morphology, faunal communities and extinction. The principles of paleontology are applied to a number of fields including those of mineral exploration, stratigraphic correlation and global tectonics.

Pre-requisite: EPS 210E/220

SDS () SES () WDS (x) WES () NCO ()

EPS 400

Research Project

A student research program under the supervision of the staff. Copies of typed reports to be submitted by April 1st.

Pre-requisite: Any two of EPS 321, 322F, 332S and 335 or P.I. plus a 75% average in the last 5 courses taken.

SDS () SES () WDS (x) WES () NCO ()

FINE ART

Faculty Advisor: Professor L. Eleen

The study of works of art provides insight into the nature of the societies in which they were created, and is one of the ways of gaining understanding of human culture in general. More specifically, the creative process leading to the making of a work of art is a subject worthy of study in its own terms. Students of Art History and Studio Art attempt to comprehend and interpret this process through learning critical and research methods and through actual practice. The subjects of their study are the visual arts: architecture, sculpture, painting and the applied arts. Such studies also complement related disciplines, of which history, philosophy and literature are examples.

Specialization in Fine Art can lead to professional work in galleries or museums, teaching at the high school or university levels, careers in illustration and design, or independent artistic activities. For post-graduate work in the History of Art, a reading knowledge of French and German and, depending upon special interests, Italian or Latin or Greek, is required; this can be most easily obtained during the undergraduate years.

Erindale College offers courses in both Art History (FAH) and Studio Art (FAS). The student can work toward a specialization in these areas, can follow a programme of combined Art History and

Studio courses, or can take occasional courses as an aspect of general education or in pursuance of a concentrated cross-disciplinary aim (for example, in Medieval or Renaissance Studies).

Students wishing to follow a specialist's programme in Fine Art (Art History) can take the majority of their courses at Erindale College, but, at the present time, must commute to the St. George Campus for part of their studies. (See the Calendar of the Faculty of Arts and Science, University of Toronto, for a description of the requirements for specialization in Art History.)

A special programme in Art Education is conducted in co-operation with Sheridan College of Applied Arts and Technology. After three years of a combined Art History and Studio Art course the student will obtain a B.A. degree in preparation for entering the Type B Certificate course at the Faculty of Education, for further general studies in art, or for careers in art galleries and museums. Credits in Studio Art are obtained by enrolling for those courses which are held at Sheridan College of Applied Arts and Technology. Selected students enroll for five credits in Studio Art during their degree programmes. The remaining arts and science credits will be taken from the regularly scheduled courses offered by Erindale College, and it is recommended that a minimum of three of these courses be in Art History. In order for the student to be eligible for a Type A Certificate, a four-year degree is necessary, with further work in Fine Art.

It should be noted that all of the courses at Sheridan College are half courses. Ten of these half courses must be taken in order to complete five Studio credits. Students who enroll in the programme normally undertake to follow the entire course of study. If they should choose to transfer out of the programme, they will, of course, retain the credits they have earned.

Those students who hope to use the Studio credits to complete a four-year specialization in Fine Art (Studio) must apply to the Department of Fine Art at the St. George campus, where each application will be judged on an individual basis.

Students who seek to enter the Art Education Programme or to specialize in Fine Art are required to consult the Faculty Adviser and enroll at the Fine Art office during the registration period.

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|----------------|---|------------------------|
| FAH 101 | Ancient Art | 2L, T7-9; 1T,N |
| | A survey of the art of Greece and Rome. Emphasis is placed upon the importance of architecture and the arts as characteristic expressions of their age; this concept is illustrated by detailed study of the outstanding monuments. <i>T. G. Elliott</i> | |
| | SDS () SES () WDS () WES (x) NCO () | |
| FAH 102 | Medieval Art and Architecture | 2L,R10-12; 1T,N |
| | A selective survey of the art of the Middle Ages. The study of Early Christian, Byzantine, and Early and Late Medieval art and architecture will be combined with a more general introduction to the language of visual expression and its interpretation. <i>L. Eleen</i> | |
| | SDS () SES () WDS (x) WES () NCO () | |
| FAH 200 | European Art from 1400 to 1750 | 3L,M2-4,W10 |
| | A selective survey of Renaissance, Mannerist, Baroque and Rococo Art in Northern and Southern Europe. The style and subject matter of architecture, sculpture and painting will be studied in relation to the cultural and intellectual environments in which they developed. <i>L. Eleen</i> | |
| | SDS () SES () WDS (x) WES () NCO () | |
| FAH 201 | European Art from 1750 to 1940 | 3L,T10-12,F2 |
| | A survey of modern art from the beginnings of Neo-Classicism to World War II, in architecture, sculpture and painting. | |
| | <i>Pre-requisite:</i> FAH 200 | |
| | SDS () SES () WDS (x) WES () NCO () | |

A history of these arts in North America from the later 17th century with special emphasis on their relationship to European traditions, the growth of distinctive national styles, and international interaction.

Exclusion: FAH 287F

Recommended preparation: FAH 200 and/or 201

SDS () SES () WDS (x) WES () NCO ()

A selective study of mural painting, manuscript illumination, panel painting and sculpture in Italy between the eleventh and the fourteenth centuries. The various regional schools will be defined and the careers of influential individual artists in the latter part of the period will be examined. *L. Eleen*

Pre-requisite: FAH 102 or P.I.

SDS () SES () WDS (x) WES () NCO ()

COURSES AT SHERIDAN COLLEGE

(Subject to limited enrolment)

The first part of the programme will be devoted to an exploration of various artistic materials, discovering the characteristic properties of each and learning to appreciate them for their own sakes. The values of colour, tone, texture and line will be dealt with and used in a positive way.

A course intended to introduce the elements of 2 dimensional design, colour, basic typography, layout, and their utilization within Graphic Design. Exercises and projects demanding the increasingly competent use of basic graphic designers' tools and media will be presented to the students. A problem solving approach based on awareness of the elements of design will be used.

This course is designed to show the potential of photography as a creative communication form. The student will receive studio and classroom instruction alternating with darkroom practices. Various camera systems will be discussed. This will allow the student to become confident in the use of photographic equipment.

This course will assist students in gaining the necessary understanding and ability to explore animation as an art form. Animation is an exciting new tool for self-expression, adding the dimension of movement to graphics. The programme will offer economical methods to meet budgetary restrictions encountered in the average educational system.

The course will teach the students to deal with the practical problems related to effective use of Super 8 film, 1/2" V.T.R., and 35mm slide and sound programmes.

In addition, screenings of appropriate films and video tape will be made to provide a basis for evaluation and to develop a language of media analysis.

- FAS 244EH Printmaking (PME 6240 SHERIDAN) N**
An introductory course in printmaking, examining linoblock, woodblock, and silkscreen. Initially, emphasis will be to gain familiarity with materials and techniques, proceeding to an understanding of the total visual concept.
Pre-requisites: FAS 145EH and 146EH or P.I.
- FAS 245EH Drawing and Painting 2 (DEG 6270 SHERIDAN) N**
The student will be encouraged to isolate various ideas and senses in graduated steps so as to concentrate on a single important aspect, i.e. movement, form, solidity, structure, anatomy, proportion and composition.
Each student will be encouraged to discipline himself by doing certain exercises to increase insight, observation and understanding. However, stress will be placed on experimentation in a variety of media.
Pre-requisite: FAS 145EH or P.I.
- FAS 246EH Design II (DNE 6240 SHERIDAN) N**
During the second year of design, the student will continue the study of text types and applications. The topics will include the history and use of the symbol. Signage, magazine, layout, book design, illustration, and use of photography in the design field will be examined in greater depth.
Pre-requisite: FAS 145EH or P.I.
- FAS 346EH Ceramics and 3D Design (CSE 6370 and TDE 6370 SHERIDAN) N**
The aim of this course is to provide students with a good basic knowledge of ceramics, guiding them towards a personal means of expression. It also introduces the functional and aesthetic aspects of 3D Design, showing that architecture, sculpture and product design share a common ground.
Pre-requisite: FAS 246EH or P.I.
- FAS 349EH Textile Crafts and Metal (TXE 6370 and MLE 6370 SHERIDAN) N**
Half of this course is designed to develop the creative co-ordination of mind and hand and also to provide the student with a good basic knowledge of creative weaving and soft sculpture. The second half of the course introduces the student to the various techniques of working metal, including copper and steel.
Pre-requisite: FAS 246EH or P.I.

FRENCH

Faculty Advisor: Professor H. H. Weinberg

The impact of French culture on the world as we know it has been profound and lasting. Indeed, no understanding of European and even North-American patterns of thought may be said to be complete without a prior understanding of the contributions made to these patterns by Frenchmen on both sides of the Atlantic. The French programme at Erindale College offers students a wide range of courses designed to provide both the tools and basic material for the study of our French heritage.

For students wishing to pursue a programme leading to a high level of competence in French, we offer a series of language courses (FRE 111, 120, 271, 371 and 471) using modern methods and maximizing the individual's contact with his instructor. For those wishing a full programme of French Studies, our introductory and upper-year offerings in linguistics and literature completely satisfy the requirements for a four-year specialist degree in French Language and Literature. These offerings include the study of French as a language system, the study of various critical approaches to literature, and the study of both French and French-Canadian literatures.

There is a great flexibility built into the programme, with few pre-requisites or co-requisites for most courses. In special cases pre-requisites will be waived if a student can satisfy the department that he is able to undertake the programme.

In addition to its usefulness as a means of communication, French can also lead to careers in the civil service, international agencies, translation and interpretation, and teaching, as well as to graduate study.

The *specialist programme* in French Language and Literature requires standing in a minimum of ten FRE courses taken as part of a four-year programme. (No more than two courses may be from each of the following groups: FRE 171, 140-142; and FRE 390, 391, 392F/S/Y.) At least two courses must be chosen from those open to third-and-higher year students and requiring a pre-requisite of FRE 271 or higher. A mark of at least 70% must be achieved in each of at least seven FRE courses. It is highly recommended that a student take at least four courses outside the French Department.

To fulfil the Department's requirements in language proficiency a student must: (a) pass a special University examination in written French, normally to be taken during the Third Year; and (b) pass a University oral examination, normally taken during the Third Year. To fulfil the Department's requirements in French linguistics a student must successfully complete at least one of FRE 272, 373, 374 or Independent Study (FRE 390, etc.) on a linguistic or stylistic topic. Students planning a teaching career are strongly encouraged to take FRE 272. To fulfil the Department's literature requirement a student must successfully complete at least four literature courses (not including FRE 171), one of which must be primarily devoted to texts prior to 1800, and one of which must be primarily devoted to texts after 1800. Students intending to take upper-level literature courses are urged to take FRE 140 or 142.

FRE 121 Intermediate French 3T,MWF12; 2P

This course is open to students with some high school French. A course in written and spoken French consisting of grammar review, structural pattern drills and corrective phonetics in class and in the language laboratory. Some study of contemporary French writing to develop vocabulary acquisition and reading comprehension. Successful completion of this course will meet the pre-requisite for FRE 171. This course may not be counted towards a specialist nor a double specialist programme. *J. LeGall*

Exclusion: Not normally open to students with Grade XIII French, FRE 111 (1973-74). Not open to native speakers of French.

SDS () SES () WDS (x) WES () NCO ()

FRE 140 Studies in Modern French Literature 2L,TR2; 1T,N

This course is intended as a practical introduction to the techniques of literary criticism and analysis, based on a detailed study of specific works selected from the novel, drama and poetry of the 19th and 20th centuries. Four novels, two plays and four collections of poetry will be selected from the works of Constant, Balzac, Zola, Barbey d'Aurevilly, Alain-Fournier, Camus, Mauriac, Hugo, Verlaine,

Baudelaire, Mallarmé, Appolinaire, Eluard, Aragon, Prévert, Anouilh, Musset, Ionesco, Beckett. *G. Chesneau*

Co-requisite: FRE 171

SDS () SES () WDS (x) WES () NCO ()

FRE 142 Studies in French-Canadian Literature 2L,TR10; 1T,N

This course is intended as a practical introduction to the techniques of literary criticism and analysis, based on a detailed study of specific French-Canadian works selected from the novel, drama, and poetry. At least four novels and one play, and a choice of poems will be selected from the works of: Beaulieu, Dubé, Ferron, Fréchette, Garneau, Giroux, Grandbois, Hébert, Jasmin, Langevin, Languirand, Loranger, Martin, Miron, Nelligan, Roy, Savard, Tremblay.

Mrs. C. Cloutier-Wojciechowska

Co-requisite: FRE 171

SDS () SES () WDS (x) WES () NCO ()

FRE 171 Introduction to University French Studies 3T,MWF9/10/11/12/1; 2P,N

The major part of this course, designed to facilitate the acquisition of the linguistic skills necessary for active participation in courses offered by the department, is devoted to language practice. However, as well as class and laboratory work in language, attention may also be given to readings and discussions.

Pre-requisite: Gr.XIII French or FRE 121

SDS (x) SES () WDS (x) WES () NCO ()

FRE 202 Modern French Theatre in English Translation 1L; 1T

Selected works of the modern French theatre in English translation, including plays by Beckett, Genet, Ionesco, and Sartre. This course may not be counted towards a specialist or a minor programme. *D. Trott*

SDS () SES () WDS () WES () NCO (x)

FRE 222 Literature of the Enlightenment 1L,N; 1T,N

A study of the revolution in social, political, religious and intellectual values which characterized the literature of the 18th century. Its principal authors — Montesquieu, Voltaire, Diderot, Rousseau — raised issues which neither the Revolution nor the 20th century has satisfactorily resolved. *A. L. Stein*

Pre-requisite: FRE 120/171

SDS () SES () WDS (x) WES () NCO ()

FRE 271 Language Practice 3T,MWF10/11/1/M7-9; 1P,N

A continuation of FRE 120, this course is designed to further the student's competence in both written and oral French. The programme will include grammar, composition, debate and language laboratory work (corrective phonetics, pattern drills, etc.). Strongly recommended for both the specialist and the non-specialist.

Not open to native speakers of French

Pre-requisite: FRE 120/171

SDS () SES () WDS (x) WES (x) NCO ()

FRE 272 The Structure of Modern French 2L,W5-7

A description of modern French: a study of the phonological, morphological and syntactical systems of the language. Strongly recommended for students preparing

for a teaching career in French language. *M. Ducretet*

Pre-requisite: FRE 120/171

SDS () SES () WDS (x) WES (x) NCO ()

FRE 316 Medieval French Language and Literature 1L,N; 1T,N

An introduction to representative literary texts of the Middle Ages in the original from the major genres, with a study of the principal features of Old French phonology, morphology and syntax. FRE 316 is required before completion of the M.A. in French at the University of Toronto. *J. Rault*

Pre-requisite: Any FRE course numbered from 271 upwards

SDS () SES () WDS (x) WES () NCO ()

FRE 318 French Literature of the Renaissance 1L; 1T

Sixteenth-century French literature records the emergence of France from the medieval into the modern era through a study of thought, literature and the arts. Rabelais is the first great writer to use the French language as a vehicle for imaginative prose; Montaigne's writings are equally important in the field of the history of ideas; and the poetry of the sixteenth century evolves from medieval formalism to the beginnings of modern lyricism. The literature of this turbulent period speaks of many of the major preoccupations of man: human and divine love, war and peace, the individual and society, nature and art, politics, language. Open to third and higher years.

Pre-requisite: FRE 271

SDS () SES () WDS () WES () NCO (x)

FRE 320 The Literature of Classicism 1L,N; 1T,N

A study of the major writers of the 17th century with emphasis upon aesthetic and moral characteristics which constitute "classicism". *D. Trott*

Pre-requisite: FRE 120/171

SDS () SES () WDS (x) WES () NCO ()

FRE 330 The Literature of French Canada to 1959 1L,TR3; 1T,N

A study of selected novels, drama and poetry. The texts will be studied from the historical, sociological and aesthetic points of view. *C. Cloutier-Wojciechowska*

SDS () SES () WDS (x) WES () NCO ()

FRE 332 The Literature of French Canada from 1960 to the Present 1L; 1T

A study of selected novels, drama and poetry. The texts will be studied from the historical, sociological and aesthetic points of view. *C. Cloutier-Wojciechowska*

Exclusion: FRE 204

Pre-requisite: Any FRE course numbered from 271 upwards

SDS () SES () WDS () WES () NCO (x)

FRE 352 French Drama from 1600 to 1800 1L; 1T

The comedies and tragedies of 17th-century France rank among the finest works of classical literature. The theatre of the 18th century is important in that it reflects a growing disenchantment with classical dramaturgy and the shift from realism that

characterizes modern drama. Specific plays by Corneille, Molière, Racine, Lesage, Voltaire, Marivaux, Sedaine and Beaumarchais. *D. A. Trott*

Pre-requisite: FRE 120/171

SDS () SES () WDS () WES () NCO (x)

FRE 354 French Drama from 1800 to 1950 1L,N; 1T,N

A study of modern drama from the Romantics to the Existentialists. This course will attempt to trace the evolution of the French stage through a detailed study of plays by Hugo, Musset, Rostand, Feydeau, Jarry, Claudel, Ghelderode, Cocteau, Giraudoux, Anouilh, Sartre, Camus, etc. *J. Rault*

Pre-requisite: FRE 120/171

SDS () SES () WDS (x) WES () NCO ()

FRE 362 Prose Fiction from 1600 to 1800 1L; 1T

A study of the evolution, in the 17th and 18th centuries, of the novel as a literary form and as a social phenomenon, using some of the most representative works of the period. Includes novels by Mme de La Fayette, Prévost, Voltaire, Diderot and Rousseau. *D. A. Trott*

Pre-requisite: FRE 120/171

SDS () SES () WDS () WES () NCO (x)

FRE 364 Prose Fiction from 1800 to 1900 1L,N; 1T,N

A study, through the close analysis of specific texts, of the ways in which such major writers as Balzac, Stendhal, Flaubert, Maupassant and Zola developed the techniques of the novel while exploring such varied themes as ambition, alienation and class struggle. *H. H. Weinberg*

Pre-requisite: FRE 120/171

SDS () SES () WDS (x) WES () NCO ()

FRE 366 Prose Fiction from 1900 to 1950 1L; 1T

Includes the study of the works of Proust, Gide, Malraux and Sartre. Attention is focused on the ways in which 20th-century writers have experimented with the forms of the novel while exploring the intellectual and psychological conflicts of this century. *H. H. Weinberg*

Pre-requisite: FRE 120/171

SDS () SES () WDS () WES () NCO (x)

FRE 368 Contemporary French Literature 1L; 1T

A study of the novel and theatre since circa 1950 with special reference to "le nouveau roman" and "l'anti-théâtre". This course will include works by Robbe-Grillet, Butor, Sarraute, Beckett, Ionesco, Genêt, and additional reading from other authors. *J. Rault*

Pre-requisite: Any French course numbered 271 or higher

SDS () SES () WDS () WES () NCO (x)

FRE 371 Language Practice 3T,MWF11/3; 1P,N

A continuation of FRE 271. Further work in written and spoken French, with attention to both literary and informal usage. Laboratory work is included in the course. Recommended as preparation for specialist examinations in French.

Pre-requisite: FRE 271

SDS () SES () WDS (x) WES () NCO ()

- FRE 373** **General History of the French Language** **1L; 1T**
 The principal aspects of the language of Northern Gaul from earliest to modern times. A general view of phonetic, morphological, syntactical and semantic evolution; regional, dialectal and social variations; attitudes of men of letters (writers, grammarians, scholars); political and social history. *M. Ducretet*
Pre-requisite: FRE 120/171
 SDS () SES () WDS () WES () NCO (x)
- FRE 374** **Introduction to the Stylistics of French** **1L,N; 1T,N**
 A study of the expressive resources of the French language and an introduction to stylistic analysis as a method of *explications de textes*. *H. H. Weinberg*
Pre-requisite: FRE 171/120
 SDS () SES () WDS (x) WES () NCO ()
- FRE 390/** **Independent Study**
391/392F/ Individual work with a member of staff on a literary or linguistic topic of common
392S/392Y interest. Intended to accommodate students who already possess the background
 necessary to embark on a more intensive study of a specific area.
Pre-requisite: Any French course numbered 271 or higher
 SDS () SES () WDS (x) WES () NCO ()
- FRE 471** **Advanced Written and Oral Expression** **1L,N; 1T,N**
 The writing of French, including various types of composition and text analyses; oral debate. This course is specifically designed to further the student's proficiency in both written and spoken French and to perfect his style.
Pre-requisite: FRE 371
 SDS () SES () WDS (x) WES () NCO ()

GERMAN

Faculty Advisor: Professor C. Saas

For the past two hundred years Germany, Austria, and German-speaking Switzerland have played increasingly important roles in European life, both as leaders in commerce and industry and as the homelands of important musicians, philosophers, scientists, psychologists, and religious and political thinkers. Their scholars are unrivalled in such fields as Biblical Studies, Medieval Studies, Philosophy, Archaeology, Art and Music History, Physics, and Chemistry.

German writers are equally distinguished. Beginning with a vigorous medieval literature and continuing through Lessing, Goethe, and Heine to Kafka, Thomas Mann, and Brecht, German literature has treated the widest range of human problems, philosophical and psychological, moral and religious, social and economic. University courses in German offer a thorough study of the more important authors from the Middle Ages to modern times.

In each year the Department offers a parallel study of the language including phonetics and laboratory work, oral expression, translation, essay writing, and the history of the language.

Although the Department prefers that students come to the university with Grade XIII German, it recognizes that not all schools offer this course and it has therefore undertaken an Introductory Course in German that will prepare students with no previous knowledge of the language to enter the

regular stream of study. Moreover, for departments or Faculties that require a student to learn to read scholarly German provision is made for appropriate instruction for beginners and for guidance in reading in specialized fields for those who already have some knowledge of the language.

To consolidate language learning and improve oral fluency the Department co-operates with the German government in sponsoring flights to Germany and summer work for a limited number of undergraduates.

German may be profitably studied in combination with other languages and literatures, with Linguistics, Philosophy, or History. It is offered as an option in such programmes for specialists as English, Music, and Fine Arts, and forms itself a part of programmes that specialize in languages and linguistics.

The successful completion of a four-year programme, including seven approved courses in German, entitles a student to do graduate work in the Department. A knowledge of German is also a valuable asset in many other fields, including foreign service. Students who desire information regarding German studies are advised to confer with the faculty advisor listed above.

Specialist Programme: 9 courses are required

First Year: Two of GER 110, 120, 130, 200
One of GER 120, 130.

Second Year: Two of GER 210, 221, 230.

Third and

Fourth Years: 326F

Two full courses from GER 321, 323F, 325, 327S, 420, 421, 423F, 424S, 425, 428S.

Two full courses from GER 310, 412F, 413S, 415F, 416S;

At least one additional half-course in GER.

Students must pass a university oral examination which will normally be taken in third year. A student must obtain an overall average of at least 70% in any nine courses counting toward specialization, and not less than 60% in any one of these nine courses.

Minor Programme: GER 326F

7 courses in a 20-course programme are required.

Three additional GER courses with a literature component;

Three courses with a language component, of which two must be from GER 110, 210, 310, 412F, 413S;

At least one additional half-course in GER.

At least 4 of the seven required courses must be at 300- or 400-level.

Students are required to pass a University oral examination, which will normally be taken during third year.

No more than two courses from GER 110, 120, 130 may be counted in the programme. GER 130 and 230 may be counted as either literature or language courses in the programme, but not as both.

A student must obtain an overall average of at least 70% in the seven courses and not less than 60% in any one of these courses.

GER 100

Introductory German

4L,MTWR10

An intensive language course for students with no previous knowledge of German. Practice in comprehension, speaking, reading, and writing. See also GER 101S, 105, 110, 205.

Exclusion: XIII GER, GER 101S, 105

SDS () SES (x) WDS (x) WES () NCO ()

- GER 101S** **Introductory German: Continuation** **4L,N; 1P,N**
 An intensive language course for students who have studied some German, but who have not yet attained Grade XIII level. Practice in comprehension, speaking, reading, and writing. See also GER 100, 105, 205, 110.
Exclusion: XIII GER, GER 100, 105
 SDS () SES () WDS (x) WES () NCO ()
- GER 105** **Reading German I** **3L,MWF11**
 Training in reading German for students with little or no previous knowledge of German and for whom this work is recommended or required by other departments or faculties. The first course in the sequence GER 105–GER 205. The Department reserves the right to place students in the appropriate course in this series.
Exclusion: XIII GER, GER 100, 101S
 SDS () SES () WDS (x) WES () NCO ()
- GER 110** **Language Practice I** **2L,MTWF11**
 An intensive course in written and spoken German. Students taking this course and intending to continue in German must take a First Year Literature course as well.
Pre-requisite: XIII GER, GER 100, 101S
Exclusion: GER 200
 SDS () SES () WDS (x) WES () NCO ()
- GER 120** **German Literature of the Twentieth Century** **2L,MW1; 1T,N**
 A study of representative works of the present century to illustrate major trends.
Ch. Saas
Pre-requisite: XIII GER, GER 100, GER 101s
 SDS () SES () WDS (x) WES () NCO ()
- GER 130** **Modern German Literature: Language Practice** **2L,2T:MTWF12**
 Selected works from the modern period with emphasis on the 20th Century. Practice in active language learning. *W. Meyer-Erlach*
Exclusion: GER 200
Pre-requisite: XIII GER, GER 100, GER 101S
 SDS () SES () WDS (x) WES () NCO ()
- GER 200** **Intermediate German** **3L,N; 2P,N**
 An intensive follow-up course for GER 100, or GER 101S, consisting of practice in comprehension, speaking, reading, and writing, plus the study of selected literary works.
Exclusion: GER 110, GER 130
Pre-requisite: XIII GER, GER 100, GER 101S
 SDS () SES () WDS (x) WES () NCO ()
- GER 205** **Reading German II** **3S,MWF1**
 The second course in the sequence GER 105–GER 205. An attempt is made to meet the needs of individual students. The Department reserves the right to place students in the appropriate course in this series.
Pre-requisite: XIII GER, GER 105, 100, 101S
 SDS () SES () WDS (x) WES () NCO ()

- GER 210 Language Practice II 3S,MTR1**
 An intensive course in written and spoken German at the intermediate level. Students taking this course and intending to specialize in German must take a Second Year Literature course as well. *W. Meyer-Erlach*
Pre-requisite: GER 120, GER 130, 200
 SDS () SES () WDS (x) WES () NCO ()
- GER 221 German Literature of the Nineteenth Century 2L,MW12; 1T,N**
 A study of a number of chosen works to represent major literary trends such as Romanticism, Realism and Naturalism. *O. Steinmetz*
Pre-requisite: GER 120, 130, 200
 SDS () SES () WDS (x) WES () NCO ()
- GER 310 Language Practice III 3S,MTR11**
 A full course in intensive language training. Available in either III. or IV. Year. *W. Meyer-Erlach*
Pre-requisite: GER 220, GER 230
 SDS () SES () WDS (x) WES () NCO ()
- GER 321 German Literature of the Enlightenment and Storm and Stress 2L,N; 1T,N**
 A study of the thought, criticism and creative writing of the *Aufklärung*, with emphasis on Lessing as its foremost representative and of some of the early works of Goethe and Schiller and their contemporaries.
Exclusion: GER 220 (1972–75) Not to be given in 1975/76
 SDS () SES () WDS (x) WES () NCO ()
- GER 325 Romanticism 2L,1T**
 A study of the Romantic period, including such writers as Novalis, Brentano, Kleist and Hoffman.
 SDS () SES () WDS () WES () NCO (x)
- GER 420 Prose and Poetry: 1885–1945 2L,MW2; 1T,N**
 A study of modern German authors such as Nietzsche, George, Hofmannsthal, Thomas Mann, Rilke, Hesse, Kafka, Stadler, Heym, Trakl. *Ch. Saas*
 SDS () SES () WDS (x) WES () NCO ()
- GER 425 Classicism 2L,MW10; 1T,N**
 Works to be studied include Faust II of Schiller's later dramas and Hölderlin's poetry. *O. Steinmetz*
Exclusion: GER 320 (1974–75)
 SDS () SES () WDS (x) WES () NCO ()
- GER 435 Hesse, Mann, Kafka 2L,M5-7; 1T,N**
 Selected works of the three writers will be read in translation. Trends and experiments in modern narrative art will be analysed. The readings will include *Siddharta*, *Steppenwolf*, *Death in Venice*, *The Metamorphosis*, and *The Trial*. Students desiring specialization for this course will read the material in the original. *Ch. Saas*
 SDS () SES () WDS () WES (x) NCO ()

See also INE 201, Film and Literature of the Weimar Period.

GEOGRAPHY

Faculty Advisors: Professor H. F. Andrews, Professor P. B. Duckworth

Geography deals with the surface of the earth and with the plants, animals, and people that dwell upon it. Its basic objective is to describe and explain the reciprocal relations of man and his environment. Geography thus uses principles and methods common to the physical, social and life sciences.

It is recognized that many students may come to Erindale with little knowledge of Geography, while others will enter with a lively curiosity already sharpened and focused by an excellent high school experience. A number of Geography courses are freely open to all students but for those who intend to concentrate in Geography three integrated programmes are offered, including Canadian Studies, Urban Studies, and Environmental Studies. A minor in Geography consists of any six full-course equivalents (six GGR credits) in the discipline.

Intending specialists in Geography must obtain standing in at least nine GGR (that is, nine full-course equivalents) courses, including GGR 202EF, 212ES, GGR 271E, GGR 301EF, GGR 381ES, and either GGR 471E or 491 E. Those specializing in Environmental Studies must choose GGR 471E. Specializing students are advised to elect at least two GGR courses in each term or to follow one of the streams suggested below. Members of the Staff of Geography will advise students concerning specialization and the courses which are most appropriate to their specific interests. A student who has met all of the qualifications for specialization in Geography will have his transcript stamped with a specialist citation in either "Geography" or "Environmental Geography" depending upon whether he has taken GGR 491E or GGR 471E, respectively.

The following courses in Geography may be included in a B.Sc. programme: GGR 202EF, 212ES, 213E, 219EF, 271E, 301EF, 372E, 373E, 375E, 376EF, 381ES, 471E, and 491E (if a topic in physical geography is chosen).

Suggested Streams in Geography

The programme in Arts and Science offers a great number of courses for student selection. Faced with such a variety, many students have difficulty in selecting an appropriate sequence. To assist in making choices the following sample programmes are suggested for consideration. In addition it is possible for individual programmes to be designed in consultation with the staff in Geography.

General Studies:

Students should take the core courses listed above plus other courses selected in consultation with staff: GGR 213E, GGR 241E, GGR 353EF and GGR 363 are among those suggested.

Environmental Studies:

Year I	GGR 173E, GGR 213E, BIO 135E, plus PHY 110 or MAT 130E or CHM 118E (or CHM 150E)
Year II	GGR 202EF, GGR 212ES, GGR 219EF, GGR 271E, plus BIO 230 or PHY 211E or APM 251E or CHM 215EF or EPS 240ES (or ECO 260ES) and 2 or 2½ options such as EPS 100, HIS 101, or ECO 100
Year III	GGR 301EF, GGR 372E, GGR 375E, GGR 381ES plus GGR 241E, GGR 250E, or BIO 330E (or BIO 332E), or CSC 108F and CSC 118S, or PHY 230E, or CHM 240E, plus 1 or 1½ options depending upon availability of GGR courses in this particular year.
Year IV	GGR 373E, GGR 471E and options from disciplines that will be helpful with topic chosen for research report to be submitted in GGR 471E "Environmental Case Studies."

Urban Studies:

Year I	GGR 131E or GGR 173E, GGR 241E, plus 3 options which might include CSC 108Y, ECO 100, HIS 100E, MAT 135, PHL 100E, POL 101, SOC 101
Year II	GGR 202EF, GGR 212ES, GGR 271E, SOC 205, plus 2 options which might include GGR 250E, GGR 255ES, ECO 200, HIS 205E, HIS 302E, MAT 235
Year III	GGR 301EF, GGR 349E, GGR 381ES, plus 3 options*
Year IV	GGR 340E, GGR 441ES, GGR 491E, or GGR 471E, plus 2½ options*

*Urban Studies programmes with different emphases can be arranged. It is strongly recommended that students consult with faculty advisors in selecting courses: certification as "Urban Studies Specialist" or "Urban Studies Minor" may be arranged through the Registrar, Innis College.

Canadian Studies:

Year I	GGR 131E or GGR 173E, GGR 241E, plus 3 options such as ANT 241E, ECO 100, HIS 205E, POL 100, or SOC 101
Year II & III	GGR 202EF, GGR 212ES, GGR 250E, GGR 271E, GGR 301EF, GGR 333ES, GGR 351E, GGR 381ES, plus 5 options which might be other GGR courses, or ECO 221E, ENG 152, HIS 308E, POL 323, SOC 303, or others.
Year IV	GGR 491E, plus 4 options.

Note: Nine GGR full course equivalents satisfy the requirements for a current Type A Certificate of Education provided a further 5 course equivalents are taken in related fields during a four-year course. Students should obtain the Erindale Geography Handbook for further information.

GGR 131E	Introduction to Man's Use of the Environment	2L,TR10; 1T,N
	Considers variations in economic and social organization in pre-industrial and technologically-advanced societies; also, man's role in landscape change, as expressed through the location of agriculture, industry, and cities. <i>T. F. McIlwraith, R. R. White</i>	
	<i>Exclusion:</i> GGR 171E (1973-74 Calendar)	
	SDS (x) SES () WDS (x) WES () NCO ()	
GGR 173E	Man and Environment	2L,TR9; 2T,N
	(Same as BIO 130E)	
	Past and present man-environment relationships are examined; principles of ecology, environmental ethics and aesthetics are outlined; crossroads alternatives for man are discussed. Stability of the climate-soil-water biota complex is studied in relation to economic exploitation in North America and certain other parts of the world. Value systems and the restoration of degraded environments are also considered. <i>P. Duckworth and J. Svoboda</i>	
	<i>Exclusion:</i> BIO 130E	
	SDS () SES () WDS (x) WES () NCO ()	
GGR 202EF	Statistics	2L,MW9; 2T,N
	(Same as STA 202EF)	
	Acquaints beginning students in Geography with the fundamentals of statistics. The course discusses statistical procedures for describing large quantities of data and for making inferences about population on the basis of samples.	
	<i>Exclusions:</i> PSY 200S, ECO 220E, STA 202EF	
	<i>Co-requisite:</i> GGR 271E	
	SDS () SES () WDS (x) WES () NCO ()	

- GGR 212ES Applications of Statistics** **2L,MW9; 1T,N**
(Same as STA 212ES)
A continuation of GGR 202EF, including analysis of variance and linear regression.
Exclusions: PSY 201S, ECO 220E, STA 202EF
Pre-requisite: GGR 202EF
SDS () SES () WDS (x) WES () NCO ()
- GGR 213E Climatology** **2L,MW10; 2P,M11-1/1-3-5/R7-9**
Brief review of the meteorological processes; world distribution of temperature, wind, and rainfall; the general circulation of the atmosphere and its variations; climates of the earth. *S. Munro*
Exclusion: First year students only may not combine with GGR 241E
SDS () SES () WDS (x) WES (x) NCO ()
- GGR 219EF Pleistocene Geomorphology** **2L,TR10; 1P,N**
An introduction to theories of glaciation and the evolution of glacial landforms with special reference to Southern Ontario. Topics included are: climatic change during the Pleistocene, stratigraphy of glacial deposits including dating methods, data collection and analysis, economic importance of sand and gravel. Field trips, *P. Duckworth*
Pre-requisite: First-year Geography Course/P.I.
SDS () SES () WDS (x) WES () NCO ()
- GGR 241E Urban Canada** **2L,TR11; 1T,N**
An introduction to urban studies through an examination of the development and character of the urban fabric and urban life in Canada. First year students only may not combine with GGR 213E. *G. Gad*
SDS () SES (x) WDS (x) WES () NCO ()
- GGR 250E Geographical Models of Man** **2L,W7-9; 1T,N**
Man's behaviour and location in space have been modelled in a variety of different ways. This course examines these various models of the man-environment interface, largely within a theoretical context. Derivative concepts from economic, sociological and psychological theory are the main sources for such models.
H. F. Andrews
SDS () SES () WDS (x) WES (x) NCO ()
- GGR 255EF Perspectives on Current Population Issues** **2L,TR9; 2T,N**
Issues in current discussions of the "population problem" are examined in light of historical writings. Optimum population size and political strength and the tradition of pessimism in population theory. *C. Houston*
SDS () SES () WDS (x) WES () NCO ()
- GGR 271E Methods of Environmental Analysis** **2L,MW11; 2P,T9-11/11-1/1-3/3-5**
Field and laboratory methods and instruments employed by geography and related sciences in the study of environmental problems, both human and natural. Projects in cartography, air photo interpretation, physical geography, pollution measurement, interviewing, urban and historical data collection, and report preparation.
J. C. Munday, C. Houston
SDS () SES () WDS (x) WES () NCO ()

- GGR 301EF Field Studies** **3P, F2-5**
 Direct out-of-doors investigation of physical and socio-economic phenomena; field observations and samples collected during a week-long field camp in September are analysed and reports submitted. Cost is about seventy dollars per student, which covers transportation and accommodation. *Staff*
Pre-requisite: GGR 271E or P.I.
 SDS () SES () WDS (x) WES () NCO ()
- GGR 331E Agriculture** **2L, T7-9; 1P, N**
 Background discussions of agricultural origins, agricultural ecology and the economic development of agricultural patterns. The concept of agricultural region and distribution of agricultural types. *D. F. Putnam*
Pre-requisite: One previous GGR course/P.I.
 SDS () SES () WDS () WES (x) NCO ()
- GGR 333EF Transportation Geography** **2L, N; 1T, N**
 Principles of transport and land use; characteristics of transportation networks and movements; transportation and economic development, past and present: geographical aspects of contemporary transportation problems. *T. F. McIlwraith*
Pre-requisite: GGR 271E or P.I.
 SDS () SES (x) WDS (x) WES () NCO ()
- GGR 340E Concepts, Methods and Values in Urban Studies** **1L, N; 3P, N**
 (Same as SOC 340E)
 Designed for students concentrating in urban studies irrespective of major disciplinary area. It provides a survey of a variety of types of urban study from the social science perspective. The major emphasis is on linkages between the ways in which urban phenomena and processes are conceptualized, the methods employed to study them and the often implicit system of values in which such investigations are framed. Urban researchers, both academic and applied will be invited to discuss their research in the context of these issues. *H. Andrews, G. Gad, H. Breslauer*
Exclusion: SOC 340E
Pre-requisites: (1) GGR 241E/SOC 205/P.I.
 (2) GGR 271E & GGR 202EF/Soc 205/P.I.
 SDS () SES () WDS (x) WES () NCO ()
- GGR 349E Advanced Urban Workshop** **3P**
 A survey of alternative methods of data collection and analysis in urban studies. Application of methods to a limited range of different topics which are to be selected according to current interests of students and staff. Apart from lectures, discussion groups and simulation games the course involves a small field trip (cost: about \$70) to another large Canadian City. *H. Andrews, G. Gad*
Pre-requisite: GGR 271E, 202EF, or equivalent, or GGR 241E
 SDS () SES () WDS () WES () NCO (x)
- GGR 351E Historical Geography of Northeastern North America** **2L; 2P**
 Social and economic development and change north of Chesapeake Bay and west through the Great Lakes area to the edge of the grasslands, from the time of first European contact. Evaluation of the land by successive generations of observers

and users is of central interest in this course. *T. F. McIlwraith*

Pre-requisite: Any two full GGR courses or P.I. A Canadian or American history course would be desirable.

SDS () SES () WDS () WES () NCO (x)

GGR 353EF Current Canadian Problems in their Historical Setting 1L; 2T

The historical roots of topical Canadian questions will be examined in this course. Students will investigate the geographical elements of such subjects as resource exploitation, farm consolidation, regional disparity, ethnicity, rural-urban inter-relations, international commerce. *T. F. McIlwraith*

Pre-requisites: At least two GGR courses, one of which is GGR 241E/ GGR 351E/GGR 361E

SDS () SES () WDS () WES () NCO (x)

GGR 361E Canada, Contemporary Regional Studies 2L,N; 1T,N

A study of the spatial relations and distribution patterns of the physical features, resources, population, and economic development. *D. F. Putnam*

Pre-requisite: An introductory Geography course

SDS () SES () WDS (x) WES () NCO ()

GGR 363E Geography of the Soviet Union 2L,T3-5; 1T,N

A survey of the geography of the Soviet Union, through an examination of topics ranging from the territorial expansion of the Russian state to contemporary issues in planning and development. Comparison of Soviet conditions with more familiar North American situations. *C. Houston*

Pre-requisite: Two Geography courses or P.I.

SDS () SES () WDS (x) WES () NCO ()

GGR 365E Problems in Contemporary Regional Design 2L,TR12; 2T,N

The application of geographical models to problems in contemporary regional design. Attention will be focussed on regional aspects of national planning in Canada and the tropics. Other examples will be taken from the United States and Europe. *R. R. White*

Pre-requisite: GGR 202EF/P.I.

SDS () SES () WDS (x) WES () NCO ()

GGR 372E Applied Climatology 2L,MW12; 1T,N

Fundamentals of energy balance climatology including principles of radiation exchange and turbulent transfer, with a view to current progress in this field. Attention will be given to the application of climatology to current environmental problems. *D. S. Munro*

Pre-requisite: PHY 254E or GGR 213E or P.I.

SDS () SES () WDS (x) WES () NCO ()

GGR 373E Remote Sensing of Environment 2L,N; 2P,N

Principles, instruments, and methods of remote data collection and analysis. Cameras, infrared scanners, microwave radiometers, and radar as used on aircraft and earth satellites. Image analysis and enhancement. Applications to social and physical geography, geology, forestry, agriculture, oceanography, hydrology, and meteorology. *J. C. Munday*

Pre-requisite: PHY 110E recommended

SDS () SES () WDS (x) WES () NCO ()

- GGR 374ES Water Quality** **2L; 1P**
 An introduction to the physical and chemical properties of water with emphasis on their importance to industrial and domestic supplies. Topics included are: measurement and analysis of dissolved and suspended constituents, phosphate and nitrate contamination of surface and ground-water supplies, treatment of sewage, legal considerations of water contamination, spatial variability of water quality with emphasis on Southern Ontario. *P. Duckworth*
Pre-requisites: CHM 120E, GGR 375E, P.I.
 SDS () SES () WDS () WES () NCO (x)
- GGR 375E Introduction to Hydrology** **2L,N; 2P,N**
 Introduction to hydrology. Management of water and watersheds using the Credit River watershed as an example. *P. Duckworth*
Pre-requisite: GGR 202EF/MAT 135E/P.I.
 SDS () SES () WDS (x) WES () NCO ()
- GGR 376EF Groundwater Hydrology** **2L; 2P**
 Groundwater movement; groundwater prospecting; well hydraulics; groundwater management; artificial recharge of aquifers. *P. Duckworth*
Pre-requisites: GGR 202EF and GGR 212ES or equivalent; MAT 135E; GGR 375E
 SDS () SES () WDS () WES () NCO (x)
- GGR 381ES Research Design** **2P,F10-12**
 Designed to give students experience in the definition of and proper approach to a research study. Sampling schemes, analytical procedures, and thesis or report formats are also covered. Students prepare a paper on the research problem which they would intend to pursue in fourth year. In addition to the statement of purpose, the paper embodies a thorough review of pertinent literature and where appropriate, data from interviews with experts in the field, personal observations and/or preliminary sample analyses. *C. Houston, P. Duckworth*
Pre-requisite: GGR 271E or P.I.
 SDS () SES () WDS (x) WES () NCO ()
- GGR 441ES Advanced Topics in Urban Studies** **2P,N**
 An advanced seminar dealing with images of cities and the spirit of place, from the viewpoint of the experimenting individual. Selected topics include: the city and the country; childhood cities; cities encountered and revisited; Canadian city images; the geography of imagination. *H. Andrews*
Exclusion: Open to fourth-year students only
Pre-requisite: P.I.
 SDS () SES () WDS (x) WES () NCO ()
- GGR 471E Environmental Case Studies** **1L,F11; 1T,N**
 A team research project. Course participants select a complex environmental problem associated with a small local region. Each student investigates one aspect with field and laboratory techniques and writes a research report: oral presentations of results are made before staff. *J. C. Munday and Staff*
Exclusion: GGR 491E
Pre-requisite: GGR 381ES (grade of 75 required) or P.I. by June 1st preceding enrolment.
 SDS () SES () WDS (x) WES () NCO ()

- GGR 476EF Coastal Processes** **2L; 2P**
 Shallow-water wave and tide mechanics; generation of coastal and longshore currents; estuarine flow; sea breeze; seiche; and tsunamis. *W. Harrison*
Pre-requisites: Open to third year students. MAT 135E, PHY 110E recommended, P.I. required
 SDS () SES () WDS () WES () NCO (x)
- GGR 477ES Coastal Responses** **2L; 2P**
 Dynamics of beaches and inlets; coastal geomorphology; nearshore sedimentation; design versus performance of coastal works. *W. Harrison*
Pre-requisite: Open to third year students. P.I. required
 SDS () SES () WDS () WES () NCO (x)
- GGR 491E B.A./B.Sc. Thesis**
 A research project, each student working on a topic of his choice under the individual guidance of a member of the staff. Copies of the thesis are to be submitted by March 1, and the student will present it before an examining committee. (May not be combined with GGR 471E.) *T. F. McIlwraith and Staff*
Pre-requisites: GGR 381ES (grade of 75 required) plus six GGR courses. Open to fourth year students only
 SDS () SES () WDS (x) WES () NCO ()

GREEK AND LATIN LITERATURE IN TRANSLATION

(See Classics)

- GLL 190E Greek and Roman Religion and Mythology** **2L, TR10; 1T,N**
 The Myths of Greece and Rome will be studied in connection with the religion of the ancient world. Attention will be focussed on the origin and development of the most important myths and their significance as inspiration for art and literature. In addition, the course will include discussion of different schools of interpretation of myth, and comparison of Greek and Roman myths to those of other cultures, particularly of the Near East and Northern Europe. *C.I. Rubincam*
 SDS () SES () WDS (x) WES () NCO ()
- GLL 200 Greek Drama in Translation** **2T**
 (I) A study of Tragedy and Comedy in ancient Greece. Reading and discussion of selected plays of Aeschylus, Sophocles, Euripides, Aristophanes. *R. L. Beck*
 SDS () SES () WDS () WES () NCO (x)
- GLL 202S The Ancient Novel** **2T**
 (I) The development in Greece and Rome of an imaginative prose literature, which anticipates the modern European novel. Greek romances present young love and sensational adventures in an idealized setting. Petronius' *Satyricon* shows the culture of Nero's Italy through the eyes of a homosexual trio, and Apuleius' *Golden Ass* recounts the experiences of a young man in Greece transformed into an ass. The *True History of Lucian*, a parody of travellers' tales, is an amusing forerunner of science fiction. *R. L. Beck*
 SDS () SES () WDS () WES () NCO (x)

(I)

A reading of selected Roman satires, with emphasis on Horace and Juvenal. Verse satire is the most personal form of Roman Literature and offers the modern reader a vivid and witty picture of people and society of the times. Of further interest is the influence of Horace and Juvenal on the formation of modern English and European satire. *R. L. Beck*

SDS () SES () WDS () WES () NCO (x)

GREEK AND ROMAN HISTORY

(See Classics)

GRH 100

Greek and Roman Civilization

2L,MW9; 1T,F9

Its political, economic and cultural evolution, beginning in an age of independent city-states, reaching rich maturity in the Hellenistic age of Great Powers, and culminating in the multiracial and muticultural Roman Empire. Its place in world history. *T. G. Elliott*

Exclusion: GRH 200/202E/300 if taken in the same year of study.

SDS () SES () WDS (x) WES () NCO ()

GRH 200

Greek History to the Death of Alexander

2L; 1T

(I)

Political, economic and intellectual progress and achievement in the Greek classical age. *C. I. Rubincam*

Exclusion: GRH 100 if taken in the same year of study.

SDS () SES () WDS () WES () NCO (x)

GRH 202E

Hellenistic and Roman Republican History

2L; 1T

(I)

The history of the kingdoms formed out of the empire of Alexander the Great, and the history of the Roman republic from its beginnings until 31 B.C. when the Greek east is taken over by the Romans and the Romans are taken over by the Caesars. *T. G. Elliott*

Exclusion: GRH 100 if taken in the same year.

SDS () SES () WDS () WES () NCO (x)

GRH 212

Caesar and Augustus (Same as HIS 486)

2T

A study of politics and society in ancient Rome during the period of the breakdown of republican government and the transition to the autocratic system of the Principate. *R. L. Beck*

SDS () SES () WDS () WES () NCO (x)

GRH 216

Alexander the Great and the Hellenistic Age

2T, R2-4

(I)

The course will examine the career and achievements of Alexander, and the shape of the world that resulted from his conquests. *C. I. Rubincam*

SDS () SES () WDS (x) WES () NCO ()

GRH 218

Religion in the Roman Empire

2T

(I)

A study of the different religious systems and beliefs competing for men's allegiance in the Roman world of the first four centuries A.D. Classical paganism and

its cults; emperor worship; the philosophical alternatives to religion; astrology; the mystery religions and Mithraism; the rise of Christianity and the development of its teachings and institutions within the social context of their times; official and popular reactions to Christianity — conversion, opposition, persecution, and the eventual establishment of Christianity as the Empire's sole religion. *R. L. Beck*
 SDS () SES () WDS () WES () NCO (x)

GHR 300 The Roman Empire 2L,MW10; 1T,F10

(I) Constitutional, economic, social, military and religious developments in the empire, from Augustus to St. Augustine. *T. G. Elliott*
Exclusion: GRH 100 if taken in the same year.
 SDS () SES () WDS (x) WES () NCO ()

GRH 312 Studies of Greek History of the Fifth Century 2T,N

Aspects of public and private life in the city-states of Greece during the fifth century B.C. will be studied through the literature of the time, supplemented by archaeological evidence. *C. I. Rubincam*
Exclusion: HIS 485 in the same year
 SDS () SES () WDS () WES () NCO (x)

See also HIS 485 and HIS 486.

HISTORY

Faculty Advisor: Professor W. B. White

History is exclusively neither an art nor a science, but a subtle blend of the two. The historical imagination reaches beyond the limits imposed by scientific method, but it does not enjoy unfettered poetic license. What is not required of art is required of history — to discover what the old universe was like rather than to invent a new one.

We study the past in order to influence, no matter how modestly, the world around us and the world within us. The influence we seek may be no more than self-control, a comforting sense of familiarity or hope in a complex environment. Historical inquiry is always a response to the human need for information, an understanding of the broad patterns of social development. Concentration in history can provide students with the analytical skills and intellectual judgment required in a number of fields. From academic research and teaching to a career in publishing, journalism or the media, the historian's contribution is substantial. Training in history is appropriate preparation for a career in law or in government service as a researcher, archivist or policy analyst.

The history programme at Erindale is designed to give students a comprehensive view of the modern world. Strong core introductions to European, Canadian, American and Third World history lead to more specialized courses, in a wide variety of fields. Students will find courses in East European, Latin American and ancient history as well as in the core areas. Introductory courses are normally conducted as a combination of lecture and tutorial; more advanced courses will be offered as seminars, allowing students experience in independent research and in presenting their findings.

Specialist Programme

Students who seek to specialize in History are required to enrol in the History Office (Room 211). A Specialist Programme in History is a four-year programme which includes at least nine full-year

courses or equivalent from the offerings of the Department. Courses from other departments (normally not more than three) may be substituted for History courses with the approval of the Specialist Programme Committee. Within this general prescription: (a) the nine courses must be chosen from a minimum of three areas; (b) in each of two areas a minimum of two 300 or 400 series courses must be chosen; (c) of the nine courses, at least two must deal exclusively with periods preceding the year 1815.

The Department's courses fall into the following areas: Canadian, U.S.A., British, Latin American, East Asian, European, East European and Russian, and History of Science and Technology.

Students should note that, in meeting these requirements, (1) the Erindale historians will alternate courses in succeeding years, (2) certain courses have been cross-listed (Spanish history and Greek and Roman history), and (3) up to two courses per year may be taken at the St. George Campus.

Students who wish to pursue a double specialization in history and in some other discipline must take at least seven courses in history. The seven courses must be chosen from a minimum of two areas; in one area, a minimum of two 300- or 400-series courses must be chosen; and at least one must deal exclusively with periods preceding the year 1815.

HIS 100E Modern Europe, 1789-1970 2L,TR9/M7-9; 1T,N
Europe from the French Revolution to the 1960's. Political, economic, social and cultural aspects will be covered.

SDS () SES () WDS (x) WES (x) NCO ()

HIS 101 The Emergence of the Third World 2L, TR11; 1T,N
An inquiry into the composition and nature of the economically under-developed regions of the world, especially Latin America, Africa, and East Asia; and an investigation of the historical and contemporary conditions that have given rise to a collectively shared "third world consciousness" among the peoples and nations of these regions. *R. E. Johnson, D. L. Raby*

SDS () SES () WDS (x) WES () NCO ()

HIS 204E History of Italy 2L; 1T
(I) A general survey of the history of Italy: political, social, economic and cultural. *C. Lavigna*

SDS () SES () WDS () WES () NCO (x)

HIS 220 The Shape of Medieval Society 2L; 1T
(I) An introductory course covering Western Europe (including Britain) from the late Roman period to the fifteenth century. A topical survey of economic, political, religious, and educational ideas and institutions.

SDS () SES () WDS () WES () NCO (x)

HIS 231 History of Great Britain, 1800-Present 2L, MW11; 1T,N
(I) The major themes of British history from the late eighteenth century: the emergence of industrial society, the fate of aristocracy, religion, cultural and intellectual change; external relations, constitutional development and political history.

Exclusion: HIS 331 (1972-73)

SDS () SES (x) WDS (x) WES () NCO ()

- HIS 240 Early Modern Europe, 1450-1815 2L, MW12, 1T,N**
(I) A general survey of the political, social and economic history of Europe from the period of the great discoveries through the Napoleonic era.
 SDS () SES () WDS (x) WES () NCO ()
- HIS 250 History of Russia, 1000-Present 2L,T2-4; 1T,R2**
(I) A thematic approach concentrating on the modern period (post-1700). Students are encouraged to follow their own interests through independent reading and special projects. *R. E. Johnson*
 SDS () SES () WDS (x) WES () NCO ()
- HIS 262 The History of Canada, 1663-1970 2L, MW10; 1T,N**
(I) A survey course designed to introduce the student to the major political, social and intellectual developments in Canada from the period of New France to the October Crisis. Themes to be examined include the emergence and evolution of distinctive French and English communities; the growth and development of political parties and protest movements; the impact of industrialization and urbanization and Canadian-American relations. *G. Brandt*
 SDS () SES () WDS (x) WES () NCO ()
- HIS 271 History of the United States, 1754-Present 2L,MW9; 1T,N**
(I) An inquiry into the American national character designed to give the student a broad understanding of significant developments in American history. Lectures and readings will focus on important traditions and institutions such as Puritanism, the Revolution, slavery, the Civil War, racism, imperialism, and the various reform movements in American history. *C. Cannon*
 SDS () SES () WDS (x) WES (x) NCO ()
- HIS 290 Introduction to Latin American History 2L, M11-1; 1T,N**
(I) Presentation of the past of Latin America in relation to its present, through investigation of selected themes: colonialism, imperialism and dependence; the succession and interaction of tribal, feudal and capitalist forms of society; racial and cultural mixture; democracy and dictatorship; nationalism, etc. *D. L. Raby*
 SDS () SES (x) WDS (x) WES () NCO ()
- HIS 313 Canadian Labour and the Left 2S**
 A study of the growth of the Canadian labour movement since Confederation and of the related development of Canadian radicalism. Social, economic and regional themes will be incorporated. *D. P. Morton*
Pre-requisite: HIS 205E/POL 100
 SDS () SES () WDS () WES () NCO (x)
- HIS 314 Quebec from the Conquest to the October Crisis 2S,W2-4/R7-9**
 The seminar discussions will cover a broad range of topics and themes relating to the evolution of the society of Quebec from 1760 to the 1970's. Emphasis will be placed on the origins and development of French-Canadian nationalism, class structure and ideology and political organization as well as on the role of the Church, responses to industrialization and urbanization, and intellectual and literary movements. *G. Brandt*
Pre-requisite: P.I. (Preference will be given to third and fourth year students)
 SDS () SES () WDS (x) WES () NCO ()

- HIS 321E British History — Special Topic 2S,T10-12**
Pre-requisite: P.I. (Preference will be given to third and fourth year students)
 SDS () SES () WDS (x) WES () NCO ()
- HIS 324E European History — Special Topic 2S,R12-2**
Pre-requisite: P.I. (Preference will be given to third and fourth year students)
 SDS () SES () WDS (x) WES () NCO ()
- HIS 330S Women in Canada, 1608-1970 2L,N**
G. Brandt
 SDS () SES () WDS () WES (x) NCO ()
- HIS 331E Canadian Parties and Politics Since 1867 2S**
 A study of the Canadian national and provincial party systems with an emphasis on techniques of political management in a federal system. *D.P. Morton*
 SDS () SES () WDS () WES () NCO (x)
- HIS 333E Canadian History from Contemporary Issues 2S**
 After a close examination of Canadian nationalism during the first term, students will be able to choose areas of special concern for detailed research. *D.P. Morton*
Pre-requisite: P.I. (Preference will be given to third and fourth year students)
 SDS () SES () WDS () WES () NCO (x)
- HIS 336E Canadian History — Special Topic 2S**
Pre-requisite: P.I.
 SDS () SES () WDS () WES () NCO (x)
- HIS 341 Italy from Unification to Fascism 2L**
 A study of the problems surrounding the unification of Italy and the unified state with emphasis upon social questions. The period covered will be from approximately 1800 to 1945. *C. LaVigna*
Exclusion: HIS 313E (1973-4)
 SDS () SES () WDS () WES () NCO (x)
- HIS 353E International Relations, 1870-1945 2S,M1-3**
 The international relations of the European powers at their zenith and in decline. The interaction of the European powers is studied from the creation of the Second Reich to the origins of the first world war, the Versailles settlement, the inter-war "twenty year crisis" through the second world war. The economic and social framework will be examined as well as political conflicts. *M. Dafoe*
 SDS () SES () WDS (x) WES () NCO ()
- HIS 355E Totalitarianism 2S**
 The seminar concentrates upon an examination of controversial interpretations of this period by some of Europe's leading authors with a view to understanding better what underlies the triumph of the 20th century totalitarian movements — Fascism, Nazism, and Stalinist Communism. *C. LaVigna*
 SDS () SES () WDS () WES () NCO (x)

- HIS 356E Social History of Russia from the Rise of Serfdom to the Present 2S**
Emphasizes the condition of the common man as affected by changing political and economic circumstances. Among the topics included are: the serf economy, the state as agent of social change, the causes and consequences of emancipation, industrial growth and modernization before and after 1917, and the achievement and prospects of Soviet society. *R. E. Johnson*
Pre-requisite: P.I.
SDS () SES () WDS () WES () NCO (x)
- HIS 357E The Renaissance 2L; 1T**
A cultural history of the 15th and 16th centuries set against the socio-economic background. The course will concentrate upon the development of the Renaissance in Italy and will deal with its manifestations in Northern Europe. *C. LaVigna*
SDS () SES () WDS () WES () NCO (x)
- HIS 359E The Russian Revolution 2S,M2-4**
The development of revolutionary ideologies, tactics, and organizations from the Decembrist movement (1825) to the consolidation of the Bolshevik Revolution. Concentrates on the writings of individual leaders (Herzen, Bakunin, Lenin) and their different strategies and goals in the struggle against tsarism. *R. E. Johnson*
Pre-requisite: P.I. (Preference will be given to third and fourth year students)
SDS () SES () WDS (x) WES () NCO ()
- HIS 364 Canada and War, 1867-1967 2S**
A topical examination of the Canadian experience of war and military preparedness, including problems of political-military relations, conscription, aid to the civil power, and military sociology. *D. P. Morton*
SDS () SES () WDS () WES () NCO (x)
- HIS 367 Canadian History: The Canadian-American Relationship 2L,T2-4**
Lectures, recitations, and readings during the first term. During the second, students will prepare, present, and comment upon papers dealing with particular subjects in the Canadian-American relationship from 1783 to the present. *A. C. Gluek*
Pre-requisite: P.I. (Preference will be given to third and fourth year students)
SDS () SES () WDS (x) WES () NCO ()
- HIS 368 The Canadian West 2S,R2-4**
The prairie west since the mid-nineteenth century. The focus will be upon the emergence of a distinctive region and its place in Canadian development. The approach will be broadly social and cultural. *A. C. Gluek*
Pre-requisite: P.I. (Preference will be given to third and fourth year students)
SDS () SES () WDS (x) WES () NCO ()
- HIS 372 The United States in the Twentieth Century 1L,1T, TR10**
A topical approach to the twentieth century designed to familiarize the student with important political, social and economic developments. For example, some topics considered will include the behaviour of the United States in the international arena, changing sexual roles and the dynamics of the family, the growth of

economic and political corporatism, the ideology of American individualism, and militarism in postwar society. *C. Cannon*

Pre-requisite: P.I. (Preference will be given to third and fourth year students)

SDS () SES (x) WDS (x) WES () NCO ()

HIS 378 Ethnicity in American History 2S,W2-4

The seminar will consider the extent to which the United States has been a "melting pot", including migrations to and settlement patterns in America, concepts of nationality and race, and problems of assimilation and acculturation. Black history and Indian-white relations will also be discussed, although the focus will be on non-Anglo-Saxon immigrants. *W. B. White*

Pre-requisite: P.I. (Preference will be given to third and fourth year students)

SDS () SES () WDS (x) WES () NCO ()

HIS 386E American Social History 1L,1T,TR11

The development and interaction of American institutional and population groups. Major themes will include the changing functions and forms of religion, the family, and education; the frontier social order; class, ethnic, and race relations; and the social consequences of urbanization and industrialization. *W. B. White*

SDS () SES () WDS (x) WES () NCO ()

HIS 388E The United States Since 1945 2S,W12-2

An examination of important political, social and intellectual developments in the postwar period of United States history. Emphasis will be placed on the convergence of political, military, and economic institutions. The Cold War will be one of many topics considered. Other topics include: McCarthyism, consumer culture, the Civil Rights movement, women's liberation, youth culture, and Watergate. *C. Cannon*

Pre-requisite: P.I. (Preference will be given to third and fourth year students)

SDS () SES () WDS (x) WES () NCO ()

HIS 389E Social Revolutions in Latin America 2S

Focuses primarily on the Mexican Revolution 1910-1940 and the Cuban Revolution from 1959 to the present, but will also include some coverage of the historical background of both countries; and similar movements in other nations of Latin America may be included if desired. Some theoretical literature on such questions as feudalism, capitalism, underdevelopment and revolution will be introduced. *D. L. Raby*

SDS () SES () WDS () WES () NCO (x)

HIS 391 Mexico: Independence to Revolution, 1810-1960 2S

A seminar considering the growth of the Mexican nation from the struggle for independence to the "institutional revolution" of today. *D. L. Raby*

Pre-requisite: P.I.

SDS () SES () WDS () WES () NCO (x)

HIS 393E History of Spain, 1815 to Present 2S

A study of the events which culminated in the defeat of the Spanish Republic in

1939 and the establishment of the authoritarian regime of General Franco. Same as SPA 393E. *J. R. Webster*

Pre-requisite: P.I. or SPA 394E

SDS () SES () WDS () WES () NCO (x)

HIS 394E History of Spain, 1469–1815 2S,T3-5

A study of the problems faced in the political unification of Spain, with emphasis on the diverse traditions of its component parts. Same as SPA 394E. *J. R. Webster*

SDS () SES () WDS (x) WES () NCO ()

HIS 401E Independent Reading

An independent study of an area of particular interest to a student or group of students carried out under the supervision of a staff member. No student may take more than one Independent Reading course in a single year.

Pre-requisite: P.I.

SDS () SES () WDS (x) WES () NCO ()

HIS 402E Historiography 2L

A study of the historian and his craft: attention will be given to important historians from classical times to the present as well as to historical source material and research methods.

Pre-requisite: P.I.

SDS () SES () WDS () WES () NCO (x)

HIS 403E Independent Reading

An independent study of an area of particular interest to a student or group of students, carried out under the supervision of a staff member. No student may take more than one Independent Reading course in a single year.

Pre-requisite: P.I.

SDS () SES () WDS (x) WES () NCO ()

HIS 485 The Problem of Government in Classical Greece 2S,T7-9

A study of forms and ideas of socio-political organization in ancient Greece, concentrating on Athens, from Solon, the founder of her democracy, to Pericles, its greatest exponent. *C. Rubincam*

SDS () SES () WDS () WES (x) NCO ()

HIS 486 The Roman Revolution 2S

A study of politics and society in ancient Rome during the period of the breakdown of republican government and the transition to the autocratic system of the Principate. *R. L. Beck*

SDS () SES () WDS () WES () NCO (x)

ERINDALE COLLEGE COURSES

INE 201 Film and Literature of the Weimar Republic N

A study of the "golden age" of German cinema, and parallel developments in the

literature of the period, including the work of Fritz Lang, Karl Mayer, and Franz Kafka.

SDS () SES () WDS () WES (x) NCO ()

INTERDISCIPLINARY STUDIES

INI 202

Canadian Culture and Society

1L,N; 1T,N; 1P,N

(I)

An introduction to aspects of Canadian culture and society for students for whom English is a second language. Guest lecturers from disciplines such as Geography, History, Political Science, Economics, Anthropology, Sociology and Architecture explore in more depth those questions raised in the preliminary 6-week orientation period. Erindale students will attend weekly lectures on the St. George Campus on Tuesdays at 6:00 p.m. Weekly seminar and tutorial meetings will be arranged. The facilities of the Erindale College Writing Laboratory are available for help in the preparation of written and oral reports. Further information can be obtained from Professor Van Fossen or from the Registrar's Office. *Mrs. H. Davidson and others*

SDS () SES () WDS (x) WES () NCO ()

ITALIAN

Faculty Advisor: L. McCormick

Italian is a worthy and even indispensable aid to studies of other literatures, especially French, Spanish and English. "Exciting" may seem a trite adjective, but one can certainly be swept along by the study of the Renaissance in Italy. A first-hand study of Machiavelli's own writings will also serve to rescue him from standard misinterpretations, and reading Michelangelo's literary works will complete one's views of his overall genius. And so one could continue from the beginnings of Italian literature to the present creative surge.

One can also mention the inherent beauty of spoken Italian with its vastly varying dialects from the top to the bottom of the "boot".

A fuller comprehension of the literary, linguistic, cultural and historical facets of Italian civilization is the goal of our programme of studies.

Graduates in Italian are in demand and will continue to be. Knowledge of another language and culture is regarded favourably by other disciplines and is frequently required for graduate-level studies. There are career opportunities in teaching, foreign affairs, trade and law.

A division has been made in ITA 100 and ITA 201 between "dialect speakers" and "non-dialect speakers". This has been done in order to meet the particular needs of each group.

The following are considered "core courses" and, therefore, necessary for specialists: ITA 201, ITA 202, ITA 300 and ITA 340Y. The balance of courses necessary for specialization may be chosen from available courses at Erindale and at St. George. In order to qualify for the M.A. programme in Italian at the University of Toronto, matriculants will need seven courses in Italian, non-matriculants will need eight.

Type A certification in Italian requires a student to have nine courses in Italian or for dual-certification a minimum of six courses in four years of university study.

- ITA 100(A) Beginning Italian for Dialect Speakers** 3L,T2R11-1; 2P,N
Grammar, translation, oral work, with a view to providing basic conversational and writing skills. For dialect speakers.
Exclusion: Grade XIII Italian
SDS () SES () WDS (x) WES () NCO ()
- ITA 100(B) Beginning Italian** 3L,M2-4,T2; 2P,N
Grammar, translation, oral work, with a view to providing basic conversational and writing skills. For non-dialect speakers.
Exclusion: Grade XIII Italian
SDS () SES () WDS (x) WES () NCO ()
- ITA 201E(A) Continuing Italian—for Dialect or Native Speakers** 2L,TR2; ½T,N
For dialect or native speakers. A comprehensive review of Italian grammar based on readings from a literary text. Creative writing and conversation are an integral part of this course.
Pre-requisite: ITA 100A/Gr. XIII ITA/P.I.
SDS () SES () WDS (x) WES () NCO ()
- ITA 201E(B) Continuing Italian** 2L,TR4; ½T,N
Designed for those whose background in Italian is solely academic.
L. T. McCormick
Pre-requisites: ITA 100B/Gr. XIII or P.I.
SDS () SES () WDS (x) WES () NCO ()
- ITA 202 Modern Italian Short Stories and Plays** 2L,T10-12; 1T,N
This course is designed as an introduction to Modern Italian Literature. Selections include "novelle" by Verga, Bassani, Moravia and others. Also to be read are plays by Pirandello. *L. T. McCormick*
Pre-requisite: ITA 100/Gr. XIII ITA/P.I.
SDS () SES () WDS (x) WES () NCO ()
- ITA 270F Reality, Myth, Death: the Modern Italian Novel** 2L,R10,3
All classes will be conducted in English and all novels will be in English translation. Works to be read include: Moravia's *The Conformist*, Bassani's *Garden of the Finzi-Contini*, Silone's *Bread and Wine*. The novels and their background will be approached in informal group discussions. Recommended in relation to the course: The Modern Italian Film, ITA 271S. *L. T. McCormick*
SDS () SES () WDS (x) WES () NCO ()
- ITA 271S The Modern Italian Film** 2L,W7-9
Some of the major films of Fellini, Antonioni and Visconti will be viewed and discussed. Some films include: *Two Women*, *La dolce vita* and *Divorce Italian Style*. Attention will be devoted to such younger directors as Bertolucci. *L. T. McCormick*
SDS () SES () WDS (x) WES (x) NCO ()
- ITA 272F Pirandello and the Modern Italian Theatre (in English translation)** 2L,T7-9; 1T,N
The problem of conflicting realities and of the definition of the personality in the

plays of Pirandello. Works by Betti and De Filippo (including: *Marriage Italian Style*) will also be read. All texts and discussions will be in English.

SDS () SES () WDS (x) WES (x) NCO ()

ITA 300E Italian Literature 2L,1-3; 1T,N

A survey of Italian Literature from its beginning to approximately 1600. The course serves as an introduction to the poetry and prose, and the types and styles of Italian literature. Dante, Petrarch, Boccaccio, Machiavelli are some of the authors to be read. *L. T. McCormick*

Pre-requisite: ITA 201E or P.I.

SDS () SES () WDS (x) WES () NCO ()

ITA 310 Dante's Inferno and Purgatorio 2L; 1T

An introduction to the work and thought of Dante with special emphasis on the *Inferno* and *Purgatorio*.

Pre-requisite: ITA 201E/P.I.

SDS () SES () WDS () WES () NCO (x)

ITA 311EF The Decameron of Boccaccio 2L; 1T

A comprehensive study of Boccaccio's major works.

Pre-requisite: ITA 201E/P.I.

SDS () SES () WDS () WES () NCO (x)

ITA 313 Petrarca 2L; 1T

A study of Petrarca's poetry and of his influence on Italian and other literatures.

L. T. McCormick

Pre-requisite: ITA 201E or P.I.

SDS () SES () WDS () WES () NCO (x)

ITA 321 The Italian Epic in the Sixteenth Century 2L,N; 1T,N

A study of Ariosto's *Orlando furioso* and Tasso's *Gerusalemme liberata* within the context of epic poetry.

SDS () SES () WDS (x) WES () NCO ()

ITA 323ES Machiavelli and Castiglione 2L,N; 1T,N

Concentrates on the *Principe* of Machiavelli and the *Cortegiano* of Castiglione and places them in their historical and literary context.

Pre-requisite: ITA 201E

SDS () SES () WDS (x) WES () NCO ()

ITA 324EF Leopardi 2L; 1T

A close reading of Leopardi's *Canti* within the context of Classical and Romantic traditions.

Pre-requisite: ITA 201E/P.I.

SDS () SES () WDS () WES () NCO (x)

ITA 330S History of the Italian Language 2L,N

The linguistic transition from Latin to Italian. Reading and linguistic analyses of early Italian texts.

Pre-requisite: ITA 201E or P.I.

SDS () SES () WDS (x) WES () NCO ()

- ITA 340E Creative Italian I** **2L,M2-4; 1T,N**
 Advanced language course which includes some attention to stylistics.
Pre-requisite: ITA 201E (A or B)
 SDS () SES () WDS (x) WES () NCO ()
- ITA 360 Twentieth Century Novel and Drama** **2L; 1T**
 A study of representative Italian novelists including Silone, Vittorini and Moravia and of such playwrights as: Pirandello, Betti and De Filippo.
Pre-requisite: ITA 201E/P.I.
 SDS () SES () WDS () WES () NCO (x)
- ITA 371EF Introduction to Modern Poetry** **2L,N; 1T,N**
 A study of the post-Romantic era, including Pascoli and D'Annunzio and the first half of the 20th century involving principally Futurism and Hermeticism.
Pre-requisite: ITA 201E A or B
 SDS () SES () WDS (x) WES () NCO ()
- ITA 390ES Verga** **2L,N; 1T,N**
 The novels and short stories of Giovanni Verga, with some attention to "Verismo". *L. T. McCormick*
Pre-requisite: ITA 201E or P.I.
 SDS () SES () WDS (x) WES () NCO ()
- ITA 399ES Pirandello** **2L,N; 1T,N**
 A study of Pirandello's plays and the problem of life vs. form and the dilemma of human personality.
Pre-requisite: ITA 201E or P.I.
 SDS () SES () WDS (x) WES () NCO ()

LATIN

(See Classics)

- LAT 100 Introductory Latin** **3T,N**
 A course designed to acquaint the student with the essentials of the Latin language and to introduce him to Roman literature.
 SDS () SES () WDS (x) WES () NCO ()
- LAT 128E Introduction to Roman Law** **2T,N**
 The purpose of this course is to improve the Latin of students with some interest in law. The reading will be selections from the second century A.D. textbook of Roman law, the *Institutes* of Gaius, which divides its subject into the law of persons, the law of things and the law of actions. Schultz' *Classical Roman Law* will be used for reference. The course will include some lectures on the history of Roman Law. *T. G. Elliott*
Pre-requisite: XIII Latin, LAT 100 or equivalent
 SDS () SES () WDS (x) WES () NCO ()

LINGUISTICS

- LIN 200** **Introduction to General Linguistics** **2L,MW10; 1T,N**
Aims at describing certain universals in the phonological, morphological, syntactical and semantic structures of language. The principal purpose is not to indoctrinate the student in any particular school of linguistic thought but rather to acquaint him with the various possibilities of analyzing the components of language.
Since the course's primary goal is to serve as a valuable tool for students of English and foreign literatures, languages, psychology, anthropology, sociology, communications, etc., a multi-disciplinary approach is used.
SDS () SES () WDS (x) WES () NCO ()
- LIN 201S** **Language Learning** **3L,M3-5**
Theory of language behaviour, with emphasis on studies of language acquisition in childhood.
SDS () SES () WDS (x) WES () NCO ()
- LIN 333** **Structure of English** **2L,N**
A systematic approach to the structure of present-day English, with attention to semantic, syntactic and phonological patterns.
SDS () SES () WDS (x) WES () NCO ()

See also FRE 373, SPA 325ES

MATHEMATICS

(See Applied Mathematics, Computer Science, and Statistics)

Faculty Advisor: Professor S. M. Trott

There are many different motivations for the study of Mathematics. To the humanist, Mathematics is a part of the mainstream of human culture, and he is likely to regard his subject as an art. To the scientist or social scientist it affords analytical and descriptive devices which greatly illuminate theory. To the engineer and economist it is an important working tool. To the mathematician, it is an end in itself. Mathematics endeavours to provide courses to suit all of these viewpoints.

The professional mathematician is most likely to find employment in universities, in the civil service or in government laboratories, and in financially or technologically oriented business firms. Research positions require post-graduate study. Such fields as teaching, computing, applied statistics, and actuarial science offer opportunities for graduates. A training in Mathematics has traditionally been a strong preparation for careers in law and business; today it is also an excellent foundation for further work in a wide variety of fields in the physical and social sciences.

The sequential nature of Mathematics means that pre-requisites are essential in most courses and that, as a rule, it is disastrous to fall behind in a course. In other words, good preparation and steady work are essential to successful completion of a mathematics course, and students without one and/or unwilling to engage in the other are advised to avoid the subject. Where pre-requisites are stated, they may be waived for students who can demonstrate adequate knowledge.

First year students with adequate preparation who want a substantial mathematics course either for its own sake or in conjunction with another field of study are advised to take MAT 139E.

Erindale College offers a range of courses sufficient for specialization in Mathematics for the first three years of study. Arrangements can be made for students with B-average or better to take a fourth year of study at the St. George Campus without transfer.

Programme in Mathematics:

First Year:	required	MAT 139E, 129
	recommended	MAT 204EF, MAT 209ES
Second Year:	required	MAT 239E, MAT 229E, MAT 204EF, MAT 209ES, APM 251E
	recommended	STA 242
Third Year:	required	MAT 319EF, MAT 314ES, MAT 340,* and APM 351E or two of STA 332F, STA 342S, STA 347S, STA 432EF

The course numbers indicate the year in which a course is normally taken, but this indication is not meant to be restrictive. Any mathematics course may be taken whenever a student has the pre-requisites or can obtain waiver of pre-requisites.

*Available only on St. George Campus.

MAT 105EF/H Introductory Calculus I **2L,TR10/12/T7-9; 2T,N**

Continuity, differentiation and integration of elementary functions with applications.

Exclusion: MAT 110, 130, 130E, 134, 135, 135E, 139, 139E, 150

SDS () SES (x) WDS (x) WES (x) NCO ()

MAT 115EH/S Introductory Calculus II **2L,TR10/12/T7-9; 2T,N**

Limits. Mean value theorem. Harder differentiation and integration. Systems of linear equations.

Exclusion: MAT 110, 130, 130E, 134, 135, 135E, 139, 139E, 150

Pre-requisite: MAT 105EF/Y

SDS () SES () WDS (x) WES (x) NCO ()

MAT 124ES Finite Mathematics **2L,TR11; 2T,N**

Vectors and linear transformations. Matrices and their properties. Notions of probability. Applications to linear programming, game theory, Markov chains.

SDS () SES () WDS (x) WES () NCO ()

MAT 129E Abstract Mathematics **2L,TR11; 2T,N**

(1) Inequalities and topology of the real numbers, properties of continuous functions. (2) Introduction to the concepts of abstract algebra including groups and rings.

Pre-requisite: Any two grade XIII maths

SDS () SES () WDS (x) WES () NCO ()

MAT 130E Calculus **2L,TR10/12/T7-9; 2T,N**

Continuity, differentiation, and integration of elementary functions with applications. Limits. Mean value theorem. Systems of linear equations.

Exclusion: MAT 105EF/Y, 115 ES/Y, 134, 135, 139, 139E, 150

Pre-requisite: XIII R & F/C

SDS () SES (x) WDS (x) WES (x) NCO ()

MAT 134 Calculus for Social Scientists **2L,10/12/T7-9; 2T,N**

Limits, continuity, the derivative, extremal problems in one variable. The Riemann

integral, antiderivatives and the fundamental theorem. Systematic techniques of integration. Vector spaces, linear transformations, matrices, determinants, linear equations. (MAT 134 has the same mathematical content as MAT 135, but illustrations will be drawn from the Social Sciences.)

Exclusion: MAT 110EF/S/110/130/135/139/139E/150/105EF/Y/115EF/Y

Pre-requisite: XIII R & F,C

SDS () SES () WDS (x) WES (x) NCO ()

MAT 135E Calculus for Scientists 2L,TR10/12/T7-9; 2T,N

Continuity and differentiation of real and complex function. The complex exponential functions. The real exponential, logarithmic, and circular functions. Antiderivatives and systematic techniques of integration. Limits. Mean value theorem. Systems of linear equations. Linear transformations and matrices. Introduction to differential equations.

Exclusion: MAT 105F/Y, 115ES/Y, 130, 134, 139, 150.

Pre-requisite: XIII R & F,C

SDS () SES (x) WDS (x) WES (x) NCO ()

MAT 139E Calculus and Linear Algebra I 2L, TR10/12/T7-9; 2T,N

Integral calculus of real functions. Topology of real vector spaces. Linear transformations. The derivative of a vector function, Jacobian matrix, chain rule. Applications to geometrical problems, to the kinematics of a particle, and to differential geometry of curves.

Reference: Williamson, Crowell and Trotter, Calculus of Vector Functions

Exclusion: MAT 110/130/134/135/139/150

Pre-requisites: XIII Calculus and Vectors and Matrices. (Students without Vectors and Matrices may enrol if they attend a special tutorial.)

SDS () SES (x) WDS (x) WES () NCO ()

MAT 204EF Modern Symbolic Logic (Same as PHL 250F) 2L,TR1; 1T,N

(I) Symbolic logic provides precise and efficient techniques for analyzing informal reasoning. It is therefore useful in fields as diverse as law, philosophy, mathematics, and computer science. Profound theorems of mathematics, having important philosophical implications, have come from the study of symbolic logic.

SDS () SES () WDS (x) WES () NCO ()

MAT 204ES Modern Symbolic Logic (Same as MAT 204EF) 2L,TR1

(I) Same as PHL 250F/S.

SDS () SES () WDS (x) WES () NCO ()

MAT 209ES Set Theory (Same as PHL 353S) 2L,TR1; 1T,N

(I) Does the barber who shaves just those who don't shave themselves shave himself? Is there a number bigger than infinity? Set theory is simultaneously the source and the solution of philosophical and mathematical paradoxes. In addition, it is the mathematics underlying all of mathematics.

Pre-requisite: MAT 204EF (formerly PHL 206F), C or better

SDS () SES () WDS (x) WES () NCO ()

- MAT 214EF Differential Equations** **2L,TR10; 1T,N**
 Ordinary differential equations. Emphasis throughout on applications. This half course is identical with the first half of MAT 235.
Exclusions: APM 251E, MAT 230, 234, 235, 239, 239E
Pre-requisite: MAT 134/135/135E/139/139E/150
 SDS () SES () WDS (x) WES () NCO ()
- MAT 224EF Intermediate Linear Algebra** **2L; 2T**
 Determinants. Linear equations. Quadratic forms and their geometrical interpretation. Spectral theorem.
Exclusions: MAT 140, 225, 225E
Pre-requisite: MAT 124EF/139E
 SDS () SES () WDS () WES () NCO (x)
- MAT 229E Algebra** **2L,MW1; 2T,N**
 Introduction to abstract algebra including groups, rings, integral domains, fields, polynomials, field extensions and other topics.
Pre-requisite: MAT 139E, MAT 129E
 SDS () SES () WDS (x) WES () NCO ()
- MAT 234 Advanced Calculus for Social Scientists** **2L,TR10; 1T,N**
 Introduction to sequences and series, power series, Taylor's series in one and many variables. Extremal problems in many variables with and without constraints, Lagrange multipliers, reduction of quadratic forms. Introduction to difference and differential equations, emphasizing linear equations with constant coefficients.
Exclusion: MAT 230/235/239/239E/250
Pre-requisite: MAT 134/135/139/139E/150
 SDS () SES () WDS (x) WES () NCO ()
- MAT 235 Advanced Calculus for Scientists** **2L,TR10; 1T,N**
 Sequences and series. Differential and Integral calculus of functions of several variables. Line and surface integrals. Ordinary differential equations. Emphasis throughout on applications.
Exclusion: MAT 230/234/239/239E/250, APM 251, MAT 214EF, 219ES
Pre-requisite: MAT 134/135/139/139E/150
 SDS () SES () WDS (x) WES () NCO ()
- MAT 304EF Intermediate Logic** **2L,WF10**
 (Same as PHL 350F)
 Is there an all-inclusive logical system? What are the scope and limits of the axiomatic method? Can all reasoning be done by computers? These and other difficult questions have been answered with the aid of modern metalogical techniques. The course provides an introduction to these techniques by studying such topics as definite descriptions, soundness, and completeness of propositional logic and metatheory of quantificational logic. A direct sequel to MAT 204EF.
Pre-requisite: MAT 204EF/PHL 250F
 SDS () SES () WDS (x) WES () NCO ()
- MAT 305ES Philosophy of Logic and Mathematics** **2L,WF10**
 (Same as PHL 351S)
 Some or all of the following topics are discussed from a semi-formal point of view:

Platonism versus nominalism, the relation between logic and mathematics, epistemological implications of Gödel's and Church's theorems, counterfactuals, necessity and possibility, extensional and intensional contexts, synonymy, intuitionism, constructivity.

Pre-requisite: MAT 204EF/PHL 250F

SDS () SES () WDS (x) WES () NCO ()

MAT 314S Point-Set Topology 2L,N; 1T,N

Brief review of set theory. Elementary topology, metric spaces, convexity in linear spaces, fixed point theorems.

Exclusion: MAT 350/339E

Pre-requisite: MAT 230/234/235/235E/239/239E/250

SDS () SES () WDS (x) WES () NCO ()

MAT 319F Introduction to Complex Analysis 2L,N; 1T,N

Cauchy's theorem, residue calculus, conformal mappings, an introduction to Fourier series.

Exclusion: MAT 334F/330/339E

Pre-requisites: MAT 230/234/235/235E/239/239E/250

SDS () SES () WDS (x) WES () NCO ()

MAT 399Y Independent Work in Mathematics

A prospective student should select his topic and advisor before the end of second year and discuss the topic with his advisor.

Pre-requisite: Acceptance by an advisor

SDS () SES () WDS (x) WES () NCO ()

See also Computer Science and Statistics and Applied Mathematics.

MUSIC

Faculty Advisor: Professor G. G. Jones

In the Faculty of Arts and Science, music is approached as one of the liberal arts and taught as cultural history.

The humanistic and historical approach aims for a high degree of correlation with other disciplines of the Faculty. To mention only a few possibilities, students of Fine Art will find fruitful parallels in MUS 100, 201 and 301; students of cultural anthropology should benefit greatly from MUS 200; students of languages and literatures will be interested to investigate how word and music interrelate in music and theatre, church music and song (MUS 301, 400, 401); while any student in the university who enjoys music will find MUS 100 a stimulating and critical introduction to world music.

MUS 100 The Study of Music Literature 2L,T11-1; 1T,N

An introduction to world music dealing with the repertory of western music from the Middle Ages to the 20th century, non-western music of high civilizations, and popular music. Discussion of form, style and the interrelationship of music and culture. *G. G. Jones*

SDS () SES () WDS (x) WES () NCO ()

- MUS 200 The Music of the World's People 2L,1T**
 A non-specialist introduction to the major musical cultures of the world. Comparative study of musical materials (melody, scales, rhythm and form), singing styles and instruments.
 SDS () SES () WDS () WES () NCO (x)
- MUS 201 Music in the Contemporary World 2L**
 The modern repertoire, including electronic, non-western and popular music developments. A non-specialist view of recent historical, theoretical, technological and social advances in music.
Pre-requisite: MUS 100 or P.I.
 SDS () SES () WDS () WES () NCO (x)
- MUS 304S Bach 2L,N**
 Selected works of J. S. Bach as representative of the high baroque period.
Pre-requisite: MUS 100/200 or P.I.
 SDS () SES () WDS (x) WES () NCO ()
- MUS 305F Beethoven 2L,N**
 A study of Beethoven's style and creative process with special reference to his sonatas, quartets and symphonies.
Pre-requisite: MUS 100/200 or P.I.
 SDS () SES () WDS (x) WES () NCO ()

PHILOSOPHY

Faculty Advisor: Professor J. T. Stevenson

Philosophical questions are distinguished by their continuing fascination for the human mind and by the perennial elusiveness of their answers. But when even moderate progress is made towards their solution, the impact upon the world of learning is often enormous. Revolutions in thought that shake the foundations of the existing sciences have occurred and exciting new disciplines have emerged. In addition, perplexing difficulties have been uncovered in the underpinnings of the natural and social sciences as well as in the presuppositions of morality, freedom, responsibility, religion, and conventionally accepted values.

The role of the philosopher is that of Socrates, the self-styled "gadfly", who refuses to *play* your game but insists on examining it critically instead. He asks *why* you made that move, recommends alternative strategies, and may even question the value of the game itself. Socrates was the first philosopher-kibitzer and he was put to death.

We invite you to kibitz with us and acquire the tools and techniques necessary for clarifying and evaluating the life and thought of the present and of past ages. Apart from the physical hazard mentioned above, a critical scrutiny of your own most cherished convictions and deeply-rooted beliefs may well blow your mind.

Students interested in specializing in Philosophy or in taking a minor should consult Professor Stevenson.

Although all courses in Philosophy are listed as half courses (with the exception of PHL 100), many of them are planned as the Fall or Spring portion of a single year-long course and are

normally taught by the same instructor in both terms. Since related first and second term courses are not always listed consecutively they are indicated by the words "In sequence with" followed by the number of the related course.

PHL 100E **Introduction to Philosophy** **2L,1T,MWF10/11/TRF12/T7-9**
An examination of a wide range of representative and important philosophical questions, such as: Are moral standards relative to one's society? Do human beings have freedom of the will? Are there rational grounds for belief in the existence of God? Is there such a thing as unselfish motivation? What is the relation between a person's mind and his body? Topics in semantics, logic and scientific method are also discussed with a view to avoiding certain common errors in reasoning.
W. J. Huggett and Staff
SDS () SES () WDS (x) WES (x) NCO ()

No course in Philosophy at the 200 level has any pre-requisites.

PHL 200F **Reason and Morality** **2L,MW1**
Can we function as human beings in society without some form of morality? We do in fact level moral accusations, express moral indignation, pass moral judgments, allot praise and blame, and justify our own actions, but how can anyone know what is morally right? And why should anyone do what is right when it is not to his advantage? This course examines the relation between reason and morality in interpersonal relations and considers arguments for hedonism, utilitarianism, emotivism and egoism. (In sequence with PHL 205F.)
SDS () SES () WDS (x) WES () NCO ()

PHL 200S **Reason and Morality**
Same as PHL 200F
SDS () SES () WDS (x) WES () NCO ()

PHL 201F **Ethical Theories** **2L,TR1**
Different and competing ethical theories have been advanced by major philosophers in answering the fundamental moral questions: What ought I to do? What does it mean to be moral? Must standards of right and wrong be subjective? We compare and assess different approaches to morality through the works of Plato, Aristotle, Hume, Kant and Mill. (In sequence with PHL 300S.)
SDS () SES () WDS (x) WES () NCO ()

PHL 202F **Aesthetics** **2L,TR11**
What is a hoax? How does one distinguish between a *genuine* work and a sham or a hoax or a fraud? In dealing with these questions light is shed on traditional puzzles in a wide range of art forms and media. Students who wish to concentrate upon one particular art form such as literature or music are encouraged to do so. (See also PHL 207F.)
SDS () SES (x) WDS (x) WES () NCO ()

- PHL 204S** **Literature and Philosophy** **2L,TR12**
 (I) Man's nature, his relation to his fellows and his place in the universe are all themes that have received significant literary and philosophical attention. Several major works of literature ranging from Greek tragedy to science fiction are examined with a view to clarifying and evaluating the philosophical doctrines they reveal and reflect. Among the authors studied in recent years: Sophocles, Camus, Brecht, Golding, Dostoevsky, Kafka, Vonnegut, Ayn Rand, and Arthur C. Clarke.
 SDS () SES () WDS (x) WES () NCO ()
- PHL 205F** **Contemporary Social Issues** **2L,MW1**
 Sexual morality and marriage; women's liberation, capital punishment and pollution are among the issues raised. The structure and validity of the arguments employed are investigated and the tenability of various moral and other principles which they contain is examined. (In sequence with PHL 200S.)
 SDS () SES () WDS (x) WES () NCO ()
- PHL 207F** **Film Aesthetics** **2L,N; 2P,N**
 (I) A selection of films from a variety of film types is shown and against this background there is a discussion of various questions concerning the aesthetics of film, such as: principles of film criticism; film space; form and content; the function of editing; acting; potentialities and limitations of the medium; "reality" in cinéma vérité. (See also PHL 202F.)
 SDS () SES () WDS (x) WES () NCO ()
- PHL 210F** **The State and the Citizen** **2L,TR11**
 The role of civil disobedience in a democratic society, the distinction between violent and non-violent modes of social action, and the validity of political radicalism. The views of contemporary social critics and philosophers on these and related themes are analyzed and assessed in order to throw light on such basic notions of political philosophy as the nature of the state, its justification and proper limits, and the obligations of citizens. (In sequence with PHL 312S.)
 SDS () SES () WDS (x) WES () NCO ()
- PHL 213F** **The University and Canadian Society** **2L,N**
 (I) A philosophical examination of the goals and function of a university in society. What is the social function and justification of granting degrees, conducting examinations or making academic evaluations? What does society demand of a university and what should it demand? Can and should a university remain politically isolated? These questions are dealt with in the light of critical examination of current work in the philosophy of education. (In sequence with PHL 214S.)
 SDS () SES (x) WDS () WES () NCO ()
- PHL 213S** **The University and Canadian Society** **2L,TR11**
 (I) Same as PHL 213F
 SDS () SES (x) WDS (x) WES () NCO ()
- PHL 214S** **Philosophy of Education** **2L,N**
 What are the proper goals of an educational system? How are they related to the kinds of social institutions and individual personalities we value? Topics discussed are drawn from the following: problems of learning theory, the knowledge indus-

try, compulsory education, indoctrination and regimentation, moral, political and doctrinal neutrality of educational systems. (In sequence with PHL 213F.)

SDS () SES (x) WDS () WES () NCO ()

PHL 216F

Deviance and Abnormality

2L,MW12

The notions of "deviance" and "abnormality" in the social sciences raise questions in theory of knowledge and ethics. According to what criteria do we decide that an action is "unnatural", a person is "insane" or "abnormal", a life-style is "deviant" or a political view is "irrational"? Is the application of these labels always arbitrary, subjective and culture-bound, or can it have some basis in human nature? (In sequence with PHL 314S.)

SDS () SES () WDS (x) WES () NCO ()

PHL 220F

Belief, Knowledge and Truth

2L,MW12

Gullibility and credulity, fads and fallacies, hoaxes in science, religion and the arts. Against this background we deal with basic topics in the theory of knowledge, such as: certainty and skepticism, the subjectivity of perception, reason and rationality, theories of truth, and the criteria and justification of claims to know.

SDS () SES () WDS (x) WES () NCO ()

PHL 220S

Belief, Knowledge and Truth

2L,MW12

Same as PHL 220F.

SDS () SES () WDS (x) WES () NCO ()

PHL 230F

Existentialism

2L,N

Sartre, Camus and others have helped make existentialism one of the most widely discussed philosophies of the present day. Principal themes examined are subjectivity, being and absurdity, freedom and choice, anxiety, dread and death. Students may concentrate on a single philosopher if they wish.

SDS () SES () WDS (x) WES () NCO ()

PHL 232S

The Philosophy of Bertrand Russell

2L

"Three passions, simple but overwhelmingly strong, have governed my life: the longing for love, the search for knowledge and unbearable pity for the suffering of mankind." (Russell.) Throughout his long career, Russell has been associated with issues such as the emancipation of women, civil liberties and opposition to wars. He has invariably supported the individual as opposed to civil or religious authority and the spirit of free enquiry as opposed to dogma. We concentrate here on the social and political aspects of Russell's thought. (Offered alternate years.)

SDS () SES () WDS () WES () NCO (x)

PHL 240F

The Birth of Philosophy I: To Plato

2L,TR10

(I)

Is morality merely an instrument in the hands of those who control the state? In answering this question Plato sketches the first account of a utopian society and deals with every important philosophical topic: the subjectivity of perception, the nature of knowledge, the relation between mind and body, the conventionalism or relativism of morality. Plato is the first major philosopher and his influence has been enormous. (In sequence with PHL 241S.)

SDS () SES (x) WDS (x) WES () NCO ()

- PHL 241S** **The Birth of Philosophy II: Aristototle and After** **2L,TR10**
 (I) Aristotle, like his teacher Plato, deals with every important philosophical issue including the nature of the universe, God, man in society, and metaphysics and, like Plato, he leaves the stamp of his own genius upon each. His views largely determined thinking on these matters until the time of the Renaissance and they continue to exert a powerful though little-noticed influence upon the thought of our own day. We therefore stress the contemporary relevance of the doctrines examined. (In sequence with PHL 240F.) *Only students who have taken PHL 240F may take this course.*
 SDS () SES (x) WDS (x) WES () NCO ()
- PHL 243F** **The Age of Reason: 17th Century Thought** **2L,TR12**
 This great formative era of modern philosophy is marked by the decline of mediaeval conceptions and the rise of modern science. Under the influence of the newly-emerging world-view, philosophers in this "age of reason" developed original analyses of knowledge and certainty, appearance and reality, freedom and necessity, mind and matter, deduction and experiment. Hobbes, Descartes, Spinoza and Locke are examined in some detail and others to a lesser extent. (In sequence with PHL 244S).
 SDS () SES () WDS (x) WES () NCO ()
- PHL 244S** **The Age of Enlightenment: 18th Century Thought** **2L,TR12**
 The philosophers of this period developed further the insights of their predecessors. Berkeley is noted for his subtle and ingenious arguments whereby he challenges the reality of an external world of material objects. Hume is the major British philosopher and is renowned for his skeptical attacks upon established beliefs and doctrines. Kant, the major German philosopher, has been a most powerful influence dominating the thought of the nineteenth century. Other philosophers of the time are examined to a lesser extent. (In sequence with PHL 243F.)
 SDS () SES () WDS (x) WES () NCO ()
- PHL 250F** **Modern Symbolic Logic** **2L,TR1; 1T,N**
 (I) (Same as MAT 204EF)
 Symbolic logic provides precise and efficient techniques for analyzing informal reasoning. It is therefore useful in fields as diverse as law, philosophy, mathematics, and computer science. The most profound theorems of mathematics, having important philosophical implications, have come from the study of symbolic logic. (In sequence with PHL 353S.)
 SDS () SES () WDS (x) WES () NCO ()
- PHL 250S** **Modern Symbolic Logic** **2L,TR3; 1T,N**
 (I) Same as PHL 250F/Mat204EF
 SDS () SES () WDS (x) WES () NCO ()
- PHL 261S** **Philosophy of Religion** **2L,MW11**
 What is the nature of religious belief and is it justifiable? In attempting to answer this and related questions we study primitive religion, three Eastern religions (Confucianism, Taoism, and Buddhism), the ontological argument for the existence of God, the Freudian critique of religion, and the relationship between science and religion. (In sequence with PHL 270F.)
 SDS () SES () WDS (x) WES () NCO ()

- PHL 270F** **Miracles, Mysticism, and the Occult** **2L,MW11**
 A study of paranormal phenomena, the significance of the occult sciences, the possibility of miracles, disembodied existence, drug-induced states of mind and genuine mystical experiences. A selection will be made from an extensive philosophical literature dealing with these topics. (In sequence with PHL 261F.)
 SDS () SES () WDS (x) WES () NCO ()
- PHL 280F** **Persons, Minds and Bodies** **2L,N**
 What is a person? Is a person a body animated by a mysterious ghostly entity called a "mind" or a "soul"? Or should we say that when we talk of minds we are *really* talking about brains or about behaviour? Does the mind or soul survive death? We examine criteria of identity of persons over time and the justification of claims that the bodies we see are bodies of persons having thoughts and experiences like our own.
 SDS () SES () WDS (x) WES () NCO ()
- PHL 281S** **Philosophical Psychology** **2L,TR3**
 What are the philosophical implications of psychological theories? What is the nature of consciousness? Is human behaviour predicatable? We use contemporary philosophical techniques to deal with these questions and others that arise where philosophy and psychology overlap.
 SDS () SES () WDS (x) WES () NCO ()
- PHL 282S** **Language and Communication** **2L,M3-5**
 Human language as a system of communication has a profound impact on the way in which we organize and manipulate our environment. This influence was accelerated by such inventions as writing and the printing press. Have the electronic mass media of the present day produced further and revolutionary changes in our world-view and modes of awareness? We deal with these questions by examining the internal structure of language and the relation of language to the world and the human mind.
 SDS () SES () WDS (x) WES () NCO ()
- PHL 283S** **The Analysis of Propaganda** **2L,MW10**
 (I) A philosophical examination of various techniques of persuasion including psychological warfare, indoctrination, brainwashing and advertising. Topics include the emotive use of language, persuasive definitions, informal fallacies, the ethical presuppositions of propaganda, and the relevance of contemporary analyses of morality to propaganda wars.
 SDS () SES () WDS (x) WES () NCO ()
- PHL 296F** **Morality, Medicine and the Law I** **2L,F12-2**
 An examination of controversial medical issues from a legal and philosophical standpoint. Among the topics considered: the involuntary commitment of the mentally ill, the protection of privacy in the doctor-patient relationship, informed consent in medical treatment, experimentation on human subjects, organ transplantation, genetic engineering, abortion, euthanasia and the right to life.
Exclusion: PHL 276F/S
 SDS () SES () WDS (x) WES () NCO ()

- PHL 297S Morality, Medicine and the Law II 2L,F12-2**
 A critical examination of controversial medical issues from a legal and philosophical standpoint. Topics will be chosen from those listed in PHL 296F.
Exclusion: PHL 277F/S
 SDS () SES () WDS (x) WES () NCO ()
- PHL 300S Contemporary Ethical Theory 2L,TR1**
 An investigation of current trends in the fields of moral philosophy and metaethics. In the area of metaethics we study the meaning of ethical statements as well as the point of studying the meaning of ethical statements. (In sequence with PHL 201F.)
 SDS () SES () WDS (x) WES () NCO ()
- PHL 312S Philosophy of Law 2L,TR11**
 Law, paradoxically, provides both shackles and freedom. Is the law's double aspect due to the unique role it plays in organized societies and states? Can there be law without coercion? Should the law legislate morals? What is the rationale of legal punishment? Are judicial decisions arbitrary? Classical and contemporary theories of jurisprudence are assessed according to the answers they provide to these and related questions. (In sequence with PHL 210F.)
Pre-requisites: Three half courses in Philosophy or three courses in the Social Sciences: PHL 210F is recommended.
 SDS () SES () WDS () SES () NCO (x)
- PHL 314S Philosophy of Social Science 2L,MW12**
 Topics and issues include: subjectivism; objectivity and values, individualism; determinism and social change; the nature and use of models and theories; explanation in approaches like Functionalism and Behaviourism. (In sequence with PHL 216F.)
Pre-requisites: Two courses in the Social Sciences/P.I.
 SDS () SES () WDS (x) WES () NCO ()
- PHL 315S Philosophy of History 2L,TR1**
 The concepts, presuppositions, methods and types of arguments used by historians are analyzed and assessed. Among the questions examined are these: What is the role of general laws in historical explanation? Can history be objective? Is history determined? Do historical explanations differ from scientific explanations? Is history without value-judgments possible?
Pre-requisites: Three courses in History or three half courses in Philosophy
 SDS () SES () WDS (x) WES () NCO ()
- PHL 344F Kant 2L**
 Kant is by universal consent one of the greatest thinkers of the modern world. There are scarcely any of the perennial problems of philosophy about which he did not think deeply and closely in terms of experience. Perhaps no thinker ever influenced his successors more. We examine systematically his most important work, *The Critique of Pure Reason*.
Pre-requisites: Three half courses in Philosophy: PHL 243F/244S recommended
 SDS () SES () WDS () WES () NCO (x)

- PHL 347EF** **Nineteenth Century Philosophy** **2L,R7-9**
 Traditional philosophical paths of reasoning and subject matter are abandoned in this most explosive and revolutionary period of thought. Philosophers like Hegel, Marx, Kierkegaard, Comte and Nietzsche bring in new concepts such as the effect of history upon philosophy, theories of dialectical materialism, existentialism, sociology, evolution and the influence of the dilemmas of our own day. (In sequence with PHL 348S.)
Pre-requisites: Three half courses in Philosophy: PHL 244S/344F is recommended)
 SDS () SES () WDS () WES (x) NCO ()
- PHL 348S** **Twentieth Century British Philosophy** **2L,R7-9**
 A survey of some main trends in contemporary philosophy including influential contributions to the fields of logical analysis, linguistics and science. Among the more important figures studied are Russell, Moore and Wittgenstein. (In sequence with PHL 347EF.) (Offered alternate years.)
Pre-requisites: Three half courses in Philosophy
 SDS () SES () WDS () WES (x) NCO ()
- PHL 350F** **Intermediate Logic** **2L,WF10**
 (Same as MAT 304F)
 Is there an all-inclusive logical system? What are the scope and limits of the axiomatic method? Can all reasoning be done by computers? These and other difficult questions have been answered with the aid of modern metalogical techniques. The course provides an introduction to these techniques by studying such topics as definite descriptions, soundness, and completeness of propositional logic and the metatheory of quantificational logic. A direct sequel to PHL 250/MAT 204.
Pre-requisite: PHL 250/MAT 204
 SDS () SES () WDS (x) WES () NCO ()
- PHL 351S** **Philosophy of Logic and Mathematics** **2L**
 (Same as MAT 305S)
 Some or all of the following topics are discussed from a semi-formal point of view: Platonism versus nominalism, the relation between logic and mathematics, epistemological implications of Gödel's and Church's theorems, counterfactuals, necessity and possibility, extensional and intensional contexts, synonymy, intuitionism, constructivity. (In sequence with PHL 350F.) (Offered alternate years.)
Pre-requisites: PHL 250/MAT 204E
 SDS () SES () WDS () WES () NCO (x)
- PHL 353S** **Set Theory** **2L,MW1; 1 T,N**
 (I) (Same as MAT 209ES)
 Does the barber who shaves just those who don't shave themselves shave himself? Is there a number bigger than infinity? Set theory is not only the source of philosophical and mathematical paradoxes but also provides the means for their solution. In addition, it is generally accepted as the mathematics underlying all of mathematics. (In sequence with PHL 250F.)
Pre-requisite: PHL 250F (Same as MAT 204EF)
 SDS () SES () WDS (x) WES () NCO ()

PHL 396F	Tutorial in Epistemology	2T,T2-4
	A concentrated examination of central topics in epistemology, e.g. necessary truth, perception, knowledge and belief. Not more than three students are assigned to each tutor.	
	<i>Pre-requisites:</i> Three half courses in Philosophy: PHL 200 is recommended	
	SDS () SES () WDS (x) WES () NCO ()	
PHL 396S	Tutorial in Epistemology	2T,T10-12
	Same as PHL 396F	
	SDS () SES () WDS (x) WES () NCO ()	
PHL 397F/S, 398F/S, 399F/S	Special Tutorial	
	<i>Pre-requisites:</i> Three half courses in philosophy	
	SDS () SES () WDS (x) WES () NCO ()	
PHL 496F, 497S, 498F, 499S	Individual Studies	
	A project of reading and research, supervised by a faculty member. Proposed projects are subject to the availability of a faculty supervisor. See the Discipline Representative for details.	
	SDS () SES () WDS (x) WES () NCO ()	

PHYSICS

Faculty Advisor: Professor S. H. Vosko

Physics was born of a desire to understand nature in a quantitative way. Guided by experiment and intuition, physicists arrive at mathematical relations among various concepts and these are then tested experimentally and extended by further research. The physics courses offered at Erindale are designed to help students both to understand and to use the concepts and relationships which have been developed, and to appreciate the need for continual questioning of scientific theories. The liberal arts student should gain insight into the nature of scientific investigation, while the student whose interest is in sciences other than physics should acquire a background knowledge leading to a deeper understanding of his own discipline. Students intending to specialize in physics will meet a broad programme of courses which will prepare them for advanced study.

The present programme in Physics at Erindale College employs the most up-to-date demonstration apparatus and undergraduate facilities. It has been designed to meet the diverse needs of the physics students of the College.

Students wishing to specialize in physics should consult a physics professor.

Recommended first-year programmes:

i) for physics and science specialists:

PHY 135E, MAT 135/MAT 139E

ii) for generalists, pre-meds, etc.:

PHY 110E, MAT 130/MAT 135

PHY 210E is recommended to students in Life Sciences, Geography and Anthropology who wish to take a second course in Physics.

Physics Specialist Programme At Erindale

Year I PHY 135E, MAT 139E

Year II PHY 230E, 254E, APM 251E, MAT 239E

Year III PHY 325E, 330E, 352E, 355E, APM 351E

Year IV Three 400 series PHY courses

(PHY 211E is suggested to students interested in experimental physics.)

Physics Minor Programme at Erindale

Year I PHY 135E/110E, MAT 135

Year II PHY 230E, MAT 235, 124EF

Year III PHY 330E, 325E

Plus PHY 211E and MAT 224ES which may be taken in Year II or III.

PHY 110E The World of Physics 2L,WF9/2; 1T,N; 1½P,N

Numerous major technical advances of the 20th century can be traced to new discoveries of modern physics. A basic understanding of the subject is therefore important in today's society. Students will be presented with a sound overview of physics. Laboratory work and lecture demonstrations will be used extensively as aids. The subject material includes: space, time and matter; energy and sources of power; wave motion; light and sound; mechanics; planetary motion and special relativity; electricity, magnetism and the physics of solids; atomic and nuclear physics. *S. S. M. Wong*

Exclusion: PHY 135E

Pre-requisite: XIII MAT R&F or C

Co-requisite: MAT 110EF, 120ES/130/135/139E

SDS () SES () WDS (x) WES () NCO ()

PHY 135E Principles of Physics I 2L,WF9; 1T,N; 1½P,N

Designed to provide science specialists with a good quantitative foundation in physics and experience in applying physical principles to simple problems. Newtonian mechanics, special relativity, and waves are emphasized, but concepts in electromagnetism and atomic and nuclear physics are also introduced. Lasers, nuclear fission and fusion, time dilation, black holes, etc. will be discussed as illustrations of basic principles. Laboratory experiments, an essay or project, and informal tutorials form an integral part of the course.

Exclusion: PHY 110E

Pre-requisite: XII PHY, XIII MAT R&F, C

Co-requisite: MAT 135/139E

SDS () SES () WDS (x) WES () NCO ()

PHY 210E Modern Physics in Medicine and Technology 2L,WF9; 1T,N

The generation of electricity by nuclear fission to operate a surgical laser illustrates the usefulness of modern physics. This course will show how some recent concepts in physics can be simply understood and applied to a wide variety of problems in medicine and technology. A selection will be made from the following topics: the mechanics of the body, fluid flow and blood circulation, radar, lasers, holography, colour vision, nuclear reactors, radioisotopes and tracer techniques, x-rays, ultrasonics, audiology, electrical activity of nerves, scientific and medical instrumentation, cryogenics and superconductivity. *R. F. Code*

Pre-requisites: PHY 110E/135E, MAT 110EF/130E/134/135/139E

SDS () SES () WDS (x) WES () NCO ()

- PHY 211E Electronics 2L,MW10; 2P,W2-5; 1T,N**
 Modern electronics for students in the physical and life sciences emphasizing the operation of scientific instruments and the design and repair of simple circuits. Problems in circuit analysis are illustrated by an interactive computer teaching programme. An independent project may be included in the laboratory. Topics include: Ohm's Law, DC circuits, AC circuits, diodes, transistors, tubes, amplifiers, oscillators, logic circuits, integrated circuits, radio, television, electronic computers and the design of instrumentation for scientific measurements.
H. W. Taylor
Pre-requisites: PHY 110E/135E, MAT 110EF/130E/134/135/139E/P.I.
 SDS () SES () WDS (x) WES () NCO ()
- PHY 230E Electromagnetism and Modern Physics 3L,MWF11; 1T,N; 1P,N**
 A basic course dealing with the following subject areas: electrostatics, Gauss's Law, electrical instruments, DC circuits, Ohm's Law, magnetostatics, Faraday's Law, AC circuits, resonance theory, and an introduction to Maxwell's equations and electromagnetic fields. The second part of the course deals with some introductory topics in modern physics, such as the quantum theory of radiation, the concept of the photon, and basic atomic structure. The elements of vector analysis will be introduced as required. Laboratory experiments are performed which illustrate subject areas such as the electric field, AC circuits, the Hall effect, etc.
Pre-requisite: PHY 110E/135E, MAT (110EF, 120ES)/130E/135/139E
 SDS () SES () WDS (x) WES () NCO ()
- PHY 254E Principles of Physics II 2L,MW9; 1T,F9; ½P,N**
 An introduction to thermal physics and a second look at mechanics and wave motion for science specialists. Topics to be included are heat conduction, convection and radiation, the first and second laws of thermodynamics, and elementary statistical mechanics; orbital mechanics, rigid-body rotation, and examples of Lagrangian methods; wave theory and interference phenomena, including applications to electromagnetic, sound and surface waves. *D. J. Dunlop*
Pre-requisites: PHY 135E/(PHY110 and P.I.), MAT 135/139E
Co-requisite: APM 251E
 SDS () SES () WDS (x) WES () NCO ()
- PHY 325E Advanced Physics Laboratory 6P,TF2-5**
 Introduces the student to some advanced concepts of physics through a set of selected experiments. Topics will include laser physics, nuclear magnetic resonance, microwave optics, cosmic ray showers, absorption of gamma rays, acousto-optical experiments, electron diffraction, gamma ray counting, coincidence counting. A few selected students may have the opportunity to participate in research activities.
Pre-requisite: PHY 230E
 SDS () SES () WDS (x) WES () NCO ()
- PHY 330E Quantum Physics 2L,TF9; 1T,F10**
 Deals with the twentieth century evolution in physics which led directly to the understanding of matter on a microscopic atomic scale. The quantization of light, energy and angular momentum, the wave-particle duality, the Schrodinger equation and its solution for simple systems, atomic systems, the properties of matter

and an introduction to nuclear physics and elementary particles will be treated from a conceptual point of view. *G. Stegeman*

Pre-requisite: PHY 230E, APM 251E/MAT 235

SDS () SES () WDS (x) WES () NCO ()

PHY 352E Electromagnetic Theory 2L,M10R9; 1T,N

An advanced treatment of electromagnetism, with special emphasis on the structure and application of Maxwell's equations. Topics in electrostatics include multipole expansions and methods of finding fields in vacuum and dielectrics. Magnetic fields and Maxwell's equations are introduced in the context of special relativity. Also treated are the propagation of electromagnetic waves in various media and radiation from antennas.

Pre-requisite: PHY 230E, 254E, APM 251E

Co-requisite: PHY 355E, APM 351E

SDS () SES () WDS (x) WES () NCO ()

PHY 355E Topics in Classical Theoretical Physics 2L,MW9; 1T,W10

Vectors and tensors with applications to hydrodynamics, heat flow in solids and diffusion, the wave equation, strain tensor and Hooke's Law. Variational principles in dynamics, and scalar fields. Complex variable theory. Applications of special functions to solutions of partial differential equations. Laplace and Fourier transforms and their applications. *S. H. Vosko*

Pre-requisites: PHY 230E, 254E, APM 251E

Co-requisite: APM 351E

SDS () SES () WDS (x) WES () NCO ()

PHY 450E Quantum Mechanics 2L,N

Quantum Mechanics is the language for the description of all microscopic phenomena in modern physics. It forms the basis of quantitative discussion of solid state, atomic, nuclear and elementary particle physics. The course attempts a rigorous first treatment of the subject for students who are already familiar with the qualitative aspects of modern physics. Topics will include: Schrodinger equation, operators and expectation values, angular momentum, Pauli principle and perturbation theory. Applications to atomic, solid state and nuclear physics will be used as examples.

Pre-requisite: PHY 330E/CHM 320E/321E

SDS () SES () WDS (x) WES () NCO ()

PHY 451EF Statistical Mechanics 2L,N

Statistical mechanics provides a microscopic explanation for the properties of macroscopic systems in equilibrium. The ensemble approach of Gibbs is developed to provide a microscopic understanding of thermodynamic laws, and to calculate the equations of state and thermodynamic properties of ideal gases. Thermodynamic potentials are introduced and used extensively. The quantum statistics of fermions and bosons are derived and applied to the quantum ideal gases and Bose condensation. Properties of real gases, liquid helium, and electrons in metals are briefly described.

Pre-requisites: PHY 252EF/254E, 330E

SDS () SES () WDS (x) WES () NCO ()

- PHY 453EF Introduction to Nuclear Physics** **2L,N**
 A basic course which establishes the fundamental properties of the atomic nucleus. Among the topics which will be discussed are: nuclear stability, radioactivity, nuclear radiations, the detection of nuclear radiations, nuclear reactions and fission.
Pre-requisite: PHY 330E/CHM 320E/321E
 SDS () SES () WDS (x) WES () NCO ()
- PHY 455ES Introduction to Solid State Physics** **2L,N**
 The fundamental features of solid state physics will be presented. Topics will include: crystal lattices and their symmetry; wave propagation in periodic structures, phonons; thermal properties of lattices; electrons in crystalline solids including simple examples of band structures; the principle properties of metals, semi-conductors and insulators; free-electron theory of metals.
Pre-requisite: PHY 330E/CHM 320E/321E
 SDS () SES () WDS (x) WES () NCO ()

- PHY 456ES Quantum Optics** **2L,N**
 The evolution of modern optics over the last fifteen years has centred about the discovery of the laser and its many applications. Deals with the basic principles of spontaneous and stimulated emission of radiation, laser action and laser resonators, the applications of lasers in scattering experiments, holography and communications systems involving fibre and integrated optics.
Pre-requisite: PHY 330E/CHM 320E/321E
 SDS () SES () WDS (x) WES () NCO ()

POLITICAL SCIENCE

Faculty Advisor: Professor R. B. Day

Political science is the study of politics and government. In general, politics are the ways in which the decisions are made about who is to rule in a society and what laws and policies are to prevail within its physical boundaries, while government is the process by which general rules are carried out. Part of political science is given over to describing specific processes or events — for example, a particular Canadian party leadership convention or such Canadian conventions generally — in somewhat the same way a biologist would describe something in physical nature. But political science will go from these particularities to generalizations. One may describe political violence in contemporary Canada within the framework of an analysis of violence in countries similar to ours or, even more generally, in all societies both past and present. The study of politics at Erindale deals not only with how politics and government *do* proceed but how they *should* be carried on in the light of a long tradition of political philosophy. Thus students will be introduced in some courses to such questions as — what tests do we apply to determine whether one kind of government is better than another? who should rule? under what conditions, if any, have people a moral obligation to disobey government?

In spite of its fascination for many people, political science is a demanding study. This is so partly because its subject-matter is very complex. But more than that, we all bring to political science opinions about what is and what ought to be which we have accepted uncritically. Here are some questions to which most people would give ready answers:

- (1) are totalitarian nations more likely to have aggressive foreign policies than have democratic countries?
- (2) is it desirable that governments should not try to "legislate morality"?
- (3) are we more likely to control environmental pollution if we vest powers over such matters in larger rather than smaller units of government?

Although most of us would be willing to make snap judgments about such questions as these, each is very complex and our opinions are probably no better founded than are those of non-experts about, say, the law of relativity or the causes of the common cold. The study of political science will not eliminate political prejudices and is not directed toward eliminating political convictions but at a minimum it gives a person more ability than he had otherwise to give an account of the basis of his beliefs both about what the political world is and what it can and should be.

The *Specialist programme* requires standing in at least 10 courses in Political Science, of which at least 8 must be 200 or higher series courses, taken as part of a four year programme. Students taking a specialist programme must enrol with the Department of Political Economy. (*Note: COM 323, Introduction to Public Administration, can be considered as a POL course.*)

Suggested First Year Preparation: One or Two of: POL 100, POL 101, POL 104. POL 100 is a pre-requisite for advanced courses in Canadian Government and Public Administration. Students will find ECO 100 particularly useful.

Second, Third, and Fourth Years

Students must include the following in their programmes:

At least two full year courses in Political Theory from POL 200, POL 320, POL 329

(or from additional offerings on the St. George Campus).

At least one full course from each of *Four* of the following *Five* fields

- Comparative Politics (Developed Countries)
- Comparative Politics (Developing Countries)
- International Relations
- Canadian Government and Public Administration
- Political Behaviour

Minor Programme in Political Science

The minor programme requires standing in at least six courses in Political Science, of which four must be 200 or higher series courses. Students must include the following in their programme:

- One of POL 101, POL 200
- One course from each of Two of the following Five fields:
 - Comparative Politics (Developed Countries)
 - Comparative Politics (Developing Countries)
 - International Relations
 - Canadian Government and Public Administration
 - Political Behaviour
- Three additional courses in Political Science

Specialist Programme in Economics and Political Science

The specialist programme in Economics and Political Science requires standing in seven Economics courses and six Political Science courses. Students must include the following courses in their programme:

Economics

- One of ECO 100, ECO 102, ECO 103
- One of ECO 200, ECO 210

- One of ECO 202E, ECO 212
- ECO 322
- One of ECO 101, ECO 201, ECO 221, ECO 222, ECO 300, ECO 302, ECO 303, ECO 305, ECO 342
- Two additional Economics courses

Political Science

- POL 100
- POL 214E
- Two of POL 101, POL 200, POL 320
- Two additional courses in Political Science (one course from two of the following five fields):
 - Comparative Politics (Developed Countries)
 - Comparative Politics (Developing Countries)
 - International Relations
 - Canadian Government and Public Administration
 - Political Behaviour

POL 100	Introduction to Canadian Politics	2L, W2-4; 1T, N
	A study of the political process in Canada, including Canadian political culture, the formation of public opinion, political behaviour, political parties, the constitution, federalism, French Canada, federal-provincial financial relations, and the structure and functioning of political institutions, such as the cabinet, parliament, the judiciary, and the public service. <i>P. Fox</i>	
	SDS () SES () WDS (x) WES (x) NCO ()	
POL 101	Introduction to Political Philosophy	2L, TR1
	The course is intended to introduce students to the most serious general theoretical statements about the nature of politics and the character of the just regime, the regime most appropriate for living the good life. It proceeds by careful study of some of the classic texts in the tradition and also hopes to give a training in how to read the great books dealing with political theory and moral problems. <i>D. V. Smiley</i>	
	SDS () SES (x) WDS (x) WES () NCO ()	
POL 104	Foreign Political Institutions	2L, R2-4, 1T, N
	A contemporary course stressing foreign political movements and forms of government relevant to twentieth century politics; Presidential government (U.S.); Parliamentary systems (France and Germany); Soviet Communism; and the fascism of Mussolini's Italy and Nazi Germany. <i>J. E. Smith</i>	
	SDS () SES () WDS (x) WES () NCO ()	
POL 200	Political Theory	2L, TR10
	The development of political thought from Plato to the controversies surrounding the French revolution. Among the theorists examined are Aristotle, Machiavelli, Hobbes, Locke and Rousseau. <i>A. Kontos</i>	
	SDS () SES () WDS (x) WES () NCO ()	
POL 203	Politics and Government of the United States	2L, M10-12
	A comparative study of the development of American government and the main	

elements of the American political tradition; the structure and functioning of executives, legislatures, courts, bureaucracies, parties, and pressure groups in federal and state government; characteristic processes of American politics such as voting, bargaining, and regulation; and resultant patterns of public policy. *P. Solomon*
 SDS () SES () WDS (x) WES () NCO ()

POL 204 Politics and Government of the U.S.S.R. 2L,W7-9

(First part of course lectures, second part seminars)

The first part of the course deals with the historical development of the Soviet political system. The second part deals with a number of current issues: the leadership; party-state relations; public administration; political socialization; and, interest groups. *R. B. Day*

SDS () SES () WDS () WES (x) NCO ()

POL 207E Politics in China: Theory and Practice 2L, M2-4

A survey of Chinese politics with emphasis on the Maoist revolutionary model and its practical consequences. *R. A. Fenn*

SDS () SES () WDS (x) WES () NCO ()

POL 208 Introduction to International Relations 2L,T11-1

A study of International systems with emphasis on the sources, patterns, and resolution of interstate conflict. *R. Gregor*

SDS () SES () WDS (x) WES () NCO ()

POL 212E Political Mass Movements 2L,W10-12

Examines the values and inherent complexities of democratic society and its non-democratic alternatives, i.e. Communism, Fascism, Nazism. *J. Barros*

SDS () SES () WDS (x) WES () NCO ()

POL 214E The State and Economic Life 2L,T2-4/T7-9

Considers the main premises of Marxism, liberalism and Democratic Socialism; the relationship between the Welfare State and the Rule of Law; economic planning and trade union activity in socialist and mixed economies; the role of interest groups in an administrative society; and the relation between political and economic structures. *R. B. Day, D. V. Smiley*

Pre-requisite: POL 100/101/ECO 100

SDS () SES () WDS (x) WES (x) NCO ()

POL 221F Political Participation 2L,M12-2

How and why do people get involved in politics? An examination of the behaviour of the ordinary citizen in Canada and the United States. Topics to be considered include: the development of mass democracy; the form and extension of popular participation; elections and voting behaviour; political protest movements. *J. Terry*

SDS () SES () WDS (x) WES () NCO ()

POL 222S Elites and Political Leadership 2L,M12-2

An introduction to the study of political leadership and the exercise of political power. Topics will include the relationship of political leaders to the non-political elites in society, the cohesiveness and responsiveness of political leadership, the

turnover of elite personnel, and the characteristics and processes of decision-making. *D. Rayside*

SDS () SES () WDS (x) WES () NCO ()

POL 314 Public Opinion and Voting 2L

An examination of the nature of political attitudes and opinions, the processes by which they are acquired, their use in describing political culture, and the role of opinions and attitudes as explanations of individuals' voting choices. Research on Canadian politics will be discussed in comparison with studies in other countries. (This course is given in alternate years, rotating with POL 221F/222S).

SDS () SES () WDS () WES () NCO (x)

POL 320 Modern Political Thought 2L, R2-4

This course examines the development of political thought in the period beginning after the French Revolution and continuing through the nineteenth century, with special attention to the implications of this development for political thought in the twentieth century. Both democratic and anti-democratic tendencies are considered. *A. Kontos T.B.A.*

SDS () SES () WDS (x) WES () NCO ()

POL 323 Topics in Canadian Politics 2L

A workshop or seminar meeting weekly in two-hour sessions. Students will be responsible for completing one major research or reading project or alternatively two term projects in areas of their own choosing in Canadian politics. Sessions will be devoted to reviewing and analyzing material related to course topics and to reports on work in progress or completed. *F. W. Peers*

SDS () SES () WDS () WES () NCO (x)

POL 327 Comparative Foreign Policy 2L

An examination on a comparative basis of the foreign policies of the United States, the Soviet Union, Great Britain, France, Germany, and India. *R. Gregor*

SDS () SES () WDS () WES () NCO (x)

POL 328 International Organization 2S,N

A weekly two-hour research seminar concerned with the development structures, and functions of international organizations. The emphasis is on the political impact of international organization in international relations. Most attention will be focused on the two universal, political organizations, the United Nations and its forerunner, the League of Nations. Other international organizations will also be considered. *J. Barros*

SDS () SES () WDS (x) WES () NCO ()

POL 329E Marxism 2L, R10-12

A survey of Marxist political thought dealing with the works of Marx; the German Social Democrats; Lenin, Trotsky and the Russian revolution; Maoism, and the problems of modern Communism. *R. B. Day*

Exclusion: SOC 408

Pre-requisite: A course in political theory or philosophy.

SDS () SES () WDS (x) WES () NCO ()

An independent research course to be undertaken by students specializing in Political Science.

Pre-requisite: P.I. and Discipline Representative

SDS () SES () WDS (x) WES () NCO ()

PSYCHOLOGY

Faculty Advisors: B. Schneider and P. L. Pliner

Psychology is the science which examines the structure and organization of behaviour in animals and man. It is concerned with the means by which behaviour is acquired and explores the mechanisms of adaptation to the social and physical environment. Emphasis is directed toward cognitive, social, physiological, genetic, and other factors which determine or affect behaviour. Among the topics covered by psychology courses are developmental changes in behaviour, learning, the structure and organization of the senses, modes of perceiving and responding, the environment and genetic events which shape behaviour, the origins and implications of drives, motives, conflicts, and emotion, and the wide variety of individual and species differences which are produced by differences in genetic endowment, physiology, and past experience.

Because of the demands of science for rigor and objectivity, stress is given to the techniques by which behaviour is studied. Because psychology is the science of the behaviour of all organisms, the discussion of animal behaviour constitutes an important part of many psychology courses. An intensive examination of experimental findings is paramount in all psychology courses.

Students who are interested in psychology as a career must be prepared for several years of graduate study. Persons who hold a Ph.D. in psychology find employment in universities, research institutes, mental hospitals and clinics, government agencies, and large corporations. A few work as self-employed consultants or therapists. The B.Sc. with a concentration in psychology is not in itself a professional qualification. People holding bachelor's degrees in psychology typically find employment in a wide variety of business, technical, educational, or social-service areas. However, further formal or on-the-job training is usually required. Nevertheless, undergraduate courses in psychology may be valuable to students planning various professional careers (e.g. in medicine, law, nursing, education, etc.).

Listed below are four suggested programmes of study in psychology. They are not "specialist" programmes but rather should be used to help you make a wise selection of courses. The "general" programme provides a broad coverage of major areas in psychology and is intended primarily for students who wish to take a balanced group of courses in psychology without emphasis on any particular area. The three remaining programmes are intended primarily for students who have a strong interest in a specific area of psychology and wish to select courses which complement this interest. Included in each programme of study are suggested courses from related disciplines.

It should be noted that these suggested programmes of study are not necessarily designed to "prepare" a student for a specific job, career, or for graduate studies. They are intended as coherent groupings of courses for students with varying academic interests within psychology. If, in fact, you are attempting to prepare yourself for a specific job or career, you should consult an appropriate counseling service in order to determine exactly what courses are desirable as preparation for such a job or career. If you intend to pursue graduate work in an area outside of psychology, such as law, education, or social work, you should consult the appropriate graduate department to find out exactly what their requirements for admission are. Finally, if you would like, eventually, to enter a graduate programme in psychology, you should consult one of the faculty members in psychology, who will help you to select appropriate courses.

General Programme in Psychology

- I PSY 100
- II PSY 200EF, 201ES, 203EF, 218EF, 268E
- III PSY 204ES, 306EF, 326ES, 209ES/213ES
One of these pairs 214EF, 351ES/208EF, 253ES/372EF, 374ES
- IV PSY 400E, 405E, 216ES, one pair from III, one more ½ PSY
At least one half course in ANT, BIO, CSC, GGR, PHL, POL or SOC in each year

Programme in Developmental Psychology

- I PSY 100
- II PSY 200EF, 201ES, 268E + ½ PSY
- III PSY 216ES (rec'd), 306 EF, 357 ES
At least two of PSY 363ES, 366ES, 378EF, 380EF
Plus one other ½ PSY
- IV PSY 400E/310EF, 311ES
PSY 405E, 310EF
Plus one other ½ PSY
At least one full course in ANT, BIO, GGR, SOC, PHL
In Year III, IV at least one half course preferably in the same discipline as a course taken in a previous year.

Joint Psychology – Biology Programme – Animal Behaviour

- I PSY 100, one of BIO 100E/135E
- II PSY 200EF, 201ES/BIO 260E
PSY 209ES, 213ES, 218EF
BIO 251E
- III PSY 370EF, 371EF/BIO 321E
Two of PSY 355ES, 363ES, 373Es, 390ES
BIO 351ES, 322EF, 323ES
- IV PSY 400E/BIO 480EY, BIO 481EY
PSY 405E
BIO 240E, 442EF

Programme in Social Behaviour

- I PSY 100, two of ANT 100E, PHL 100E, SOC 101
- II PSY 200EF, 201ES, 203EF, 204ES, 268E
At least one of ANT 204E, 232E, PHL 216F, 281F
POL 201, SOC 202, 205, 212, 214E
- III PSY 326ES, 356EF
One of PSY 364ES, 365ES, 366ES
PSY 380EF, 218EF
At least one of PHL 314S, SOC 310ES, 311, 329EF, 328ES
- IV PSY 400E, 405E, 216ES
One of these pairs PSY 214EF, 351ES/208EF, 353ES/372EF, 374ES/209ES

At least one half course, preferably in one of the same discipline as outside courses taken in I, II, III

PSY 100

Introductory Psychology

2L,N

Psychology is the science of behaviour; and this course seeks to acquaint the

student with the scientific method as it is applied in attempting to understand both human and animal behaviour. *This course is a pre-requisite for all other psychology courses.*

SDS (x) SES (x) WDS (x) WES (x) NCO ()

PSY 200EF Statistics and Research Design I 3L,N

Basic descriptive and inferential statistics.

SDS () SES () WDS (x) WES (x) NCO ()

PSY 201ES Statistics and Research Design II 3L,R12-2

Concerned with the design of experiments and the more advanced methods of statistical analysis, including complex analysis of variance. *B. Schneider*

Pre-requisite: PSY 200EF or equivalent

SDS () SES () WDS (x) WES () NCO ()

PSY 203EF Introduction to Social Psychology 3L,N

A survey of contemporary areas of research in social psychology. Areas to be considered include social perception, attitudes, interpersonal relations, group processes, and ethnic attitudes. *P. Pliner, R. Rosenbaum*

Pre-requisite: PSY 100

SDS (x) SES () WDS (x) WES (x) NCO ()

PSY 204ES Personality 3L,N

Emphasis on empirical research in such areas as authoritarianism, need for achievement, manifest anxiety, self-concept. *P. Pliner, R. Rosenbaum*

Pre-requisite: PSY 100

SDS () SES () WDS (x) WES () NCO ()

PSY 208EF Sensory and Perceptual Processes 3L,N

Examination of theoretical and experimental efforts aimed at understanding sensory and perceptual function. Emphasis will be placed on vision research at both the physiological and behavioural levels. *B. Schneider*

Pre-requisite: PSY 100

SDS () SES () WDS (x) WES () NCO ()

PSY 209ES Physiological Psychology 3L,N

An introduction to the study of the neural and endocrinological basis of behaviour. *M. Moscovitch*

Pre-requisite: PSY 100

SDS () SES () WDS (x) WES () NCO ()

PSY 213EF Comparative Psychology 3L,N

The innate and learned social responses of a variety of animals will be studied with emphasis on both the similarities and differences in species-specific modes of responding. *L. Krames*

Pre-requisite: PSY 100

SDS () SES () WDS (x) WES () NCO ()

- PSY 214EF Human Memory and Learning 3L,N**
 Facts, theories, and methods in the study of human learning. Major emphasis will be on recent trends in the study of verbal learning, memory and verbal behaviour. *F. I. M. Craik*
Pre-requisite: PSY 100 (PSY 216ES recommended)
 SDS () SES () WDS (x) WES () NCO ()
- PSY 216ES Experimental Design and Theory 3L**
 Problems involved in experimental design and the interpretation of experimental findings; the logical structure in psychological theories. Practice in the critical evaluation of experimental designs and the correction of experimental errors. *T. M. Alloway*
 SDS () SES () WDS () WES () NCO (x)
- PSY 218EF Classical and Instrumental Conditioning 3L,N**
 Phenomena of classical and instrumental conditioning in mammals will be discussed from both an empirical and a theoretical point of view. *T. M. Alloway*
Pre-requisite: PSY 100
 SDS () SES () WDS (x) WES () NCO ()
- PSY 268E Developmental Psychology: Childhood 3L,N**
 A survey of contemporary research and theory in the scientific study of the behaviour of children. *C. Corter*
 SDS () SES () WDS (x) WES () NCO ()
- PSY 306EF Introductory Psycholinguistics 3L,N**
 A contemporary approach to the psychological study of language and speech, highlighting the biological and cognitive aspects of language acquisition and use. *S. Trehub*
Pre-requisite: PSY 100 (PSY 214EF and PSY 218EF recommended)
 SDS () SES () WDS (x) WES () NCO ()
- PSY 310EF† Individual Project N**
 Designed for students desiring to pursue independent research into a specific aspect of human or animal behaviour.
Pre-requisites: PSY 200EF, 201ES, a laboratory course and P.I.
 SDS () SES () WDS (x) WES () NCO ()
- PSY 311ES† Individual Project N**
 Designed for students desiring to pursue independent research into a specific aspect of human or animal behaviour.
Pre-requisites: PSY 200EF, 201ES, a laboratory course and P.I.
 SDS () SES () WDS (x) WES () NCO ()
- PSY 326ES Abnormal Psychology 3L,N**
 A survey of theories and research on abnormal behaviour and psychological treatment with special emphasis on social learning theory and behaviour modification techniques. *K. R. Blankstein*
Pre-requisite: PSY 204ES/PSY 218EF and P.I.
 SDS () SES () WDS (x) WES () NCO ()

- PSY 351ES Laboratory in Human Memory and Learning 3P,N**
 Experiments will be carried out to illustrate recent theoretical and experimental issues. Students use themselves (and other students) as subjects and are encouraged to design, carry out and write up experiments in this area. Enrolment in this course will be limited to 20 students. *F. I. M. Craik*
Pre-requisites: PSY 200EF, PSY 201ES, PSY 214EF
 SDS () SES () WDS (x) WES () NCO ()
- PSY 353ES Laboratory in Sensory and Perceptual Processes 1L,3P**
 The fundamentals of sensory and perceptual processes, chiefly visual. Students conduct weekly laboratory experiments, using each other as subjects. Enrolment in this course will be limited to 20 students. *B. Schneider*
Pre-requisites: PSY 200EF, PSY 201ES, PSY 208EF
 SDS () SES () WDS () WES () NCO (x)
- PSY 355ES Laboratory in Psychobiology 1L,N; 3P,N**
 Supervised demonstration experiments designed to familiarise students with methods of collecting, analysing, and reporting data in ethological and physiological experiments employing animal subjects. Students will also learn how to handle selected species of animals. Enrolment in this course will be limited to 24 students. *M. Moscovitch*
Pre-requisites: PSY 200EF, PSY 201ES and either PSY 209ES or PSY 213EF
 SDS () SES () WDS (x) WES () NCO ()
- PSY 356EF Laboratory in Social Psychology 1L,N; 3P,N**
 Independent research projects in the general areas of social psychology or personality. Each project will include the design of an experiment, data collection, and a written report. Enrolment in this course will be limited to 25 students. *R. Rosenbaum*
Pre-requisites: PSY 200EF, PSY 201ES, one of PSY 203EF or PSY 204ES
 SDS () SES () WDS (x) WES () NCO ()
- PSY 357ES Laboratory in Developmental Psychology 3P,N**
 Readings, laboratory exercises and research projects designed to acquaint the student with methodology appropriate for infant and child study. Enrolment in this course will be limited to 20 students. *S. Trehub*
Pre-requisites: PSY 200EF, PSY 201ES, PSY 268E/PSY 368EF
 SDS () SES () WDS (x) WES () NCO ()
- PSY 362ES Animal Behaviour and Ethology 3L,N**
 A study of the social behaviour of organisms (human and non-human) as observed and measured in both laboratory and field settings. *T. M. Alloway*
Pre-requisite: PSY 213EF
 SDS () SES () WDS (x) WES () NCO ()
- PSY 363ES Developmental Psychology: Early Experience 2L,N**
 A consideration of the ontogeny of behaviour in human and non-human organisms. Stress is placed upon consideration of the effects of early experience on later

behaviour as well as on developing a scheme which permits the comparison of developmental organization among various species. *L. Krames*

Pre-requisites: PSY 100, PSY 213ES/368EF

SDS () SES () WDS (x) WES (x) NCO ()

PSY 364ES Social Psychology: Attitudes 3L

Intensive study of social attitudes and opinions — their development, description and measurement, modification, and organisation. Enrolment in this course will be limited to 20 students.

Pre-requisite: PSY 203EF and P.I.

SDS () SES () WDS () WES () NCO (x)

PSY 365ES Social Psychology: Inter-personal Behaviour 3L,N

Detailed analysis of some of the determinants and consequences of various forms of social interaction; conformity and social influence, social comparison, affiliation. Enrolment in this course will be limited to 20 students. *P. Pliner*

Pre-requisite: PSY 203EF and P.I.

SDS () SES () WDS (x) WES () NCO ()

PSY 366ES Social Psychology: Social Perception 3L,N

Examination in depth of the ways in which people view others and of the psychological processes underlying these views: impression formation, ingratiation and the presentation of self, cognitive consistency. Enrolment in this course will be limited to 20 students. *R. M. Rosenbaum*

Pre-requisite: PSY 203EF and P.I.

SDS () SES () WDS (x) WES () NCO ()

PSY 367EF Nonverbal Communication 3L,N

A survey of research and theory concentrating on non-verbal communication as a form of social organization. Topics such as facial expressions, gestures, proxemics will be discussed. The main concentration will be on human adults, but research on children and non-human primates will also be reviewed. *R. Abramovitch*

Pre-requisites: PSY 100E and P.I.

SDS () SES () WDS (x) WES () NCO ()

PSY 369EF Developmental Psychology: Adolescence 3L

A survey of contemporary research and theory on adolescent behaviour.

Pre-requisite: PSY 268E/368EF

SDS () SES () WDS () WES () NCO (x)

PSY 370EF Motivation 3L,N

A view of the crucial variables which serve as an impetus to behaviour in both human and non-human organisms.

Pre-requisite: Recommended PSY 100 and PSY 209ES. Available to second year students on P.I.

SDS () SES () WDS (x) WES () NCO ()

PSY 371EF Advanced Physiological Psychology 3L,N

Current areas of research in physiological psychology will be explored in detail. These areas will include the following: the hormonal basis of human and animal behaviour, the development of motivational systems and perceptual capacities, the

physiological bases of memory, language, and other higher cortical functions in man; and the neurochemical bases of sleep and emotion.

Pre-requisite: PSY 209ES and P.I.

SDS () SES () WDS (x) WES () NCO ()

PSY 372EF Psychophysiology 3L,N

Examines the interrelationships between physiological and psychological aspects of behaviour. The emphasis is on studies employing human subjects whose physiological responses are recorded on a polygraph while stimuli are presented which are designed to influence mental, emotional or motor behaviour. Enrolment in this course will be limited to 20 students. *K. R. Blankstein*

Pre-requisite: PSY 218EF and P.I.

SDS () SES () WDS (x) WES () NCO ()

PSY 373ES Comparative Psychology of Learning 3L

The learning capacities of a number of different kinds of animals will be discussed and compared. Consideration will be given to theoretical and practical problems encountered in attempting to understand the evolution of learning capacities.

T. M. Alloway

Pre-requisite: PSY 218EF and P.I.

SDS () SES () WDS () WES () NCO (x)

PSY 374ES Laboratory in Psychophysiology 3P,N

The fundamentals of psychophysiological research. Students conduct weekly laboratory experiments with the polygraph, using each other as subjects. Topics include recording, scoring and quantification problems, autonomic reactivity, habituation, reaction time, classical and instrumental conditioning, biofeedback and lie-detection. Enrolment in this course will be limited to 15 students.

K. R. Blankstein

Pre-requisites: PSY 200EF, PSY 201ES, PSY 372EF and P.I.

SDS () SES () WDS (x) WES () NCO ()

PSY 375EF Cognitive Neurology 2S,N

Problems in cognitive psychology will be explored from the viewpoint of clinical neurology. Some sample topics: amnesia and models of memory; split-brain research; the temporal lobes and verbal and non-verbal memory; the role of the frontal lobes; perceptual asymmetries in normal people; models of brain function.

M. Moscovitch

Pre-requisite: PSY 209ES or 214EF

SDS () SES () WDS (x) WES () NCO ()

PSY 376ES Developmental Psychology: Perceptual Development 3L,N

A survey of current research in auditory and visual abilities in infancy and childhood. *S. Trehub*

Pre-requisite: PSY 268E/PSY 368EF and P.I.

SDS () SES () WDS (x) WES () NCO ()

- PSY 378EF Developmental Psychology: Cognitive Development 3L,N**
 A survey of contemporary research and theory in the development of language, thinking and intelligence, including a consideration of Piaget's views.
R. Abramovitch
Pre-requisite: PSY 268E/368EF and P.I.
 SDS () SES () WDS (x) WES () NCO ()
- PSY 380EF Developmental Psychology: Early Social Behaviour 3L**
 An examination of research on topics such as attachment, dependency, and peer relations in infants and young children. Enrolment in this course will be limited to 25 students.
Pre-requisite: PSY 268/368EF and P.I.
 SDS () SES () WDS () WES () NCO (x)
- PSY 383ES Developmental Psychology: Social Development 3L,N**
 A survey of contemporary research and theory in various aspects of social development such as moral development, sex-role development, aggression, pro-social behaviour. *R. Abramovitch*
Pre-requisite: PSY 268E/PSY 368EF and P.I.
 SDS () SES () WDS (x) WES () NCO ()
- PSY 385EF Mammalian Social Behaviour 2S**
 A seminar limited to 12 students for the preparation and discussion of papers dealing with such mammalian social phenomena as co-operation, social facilitation, agonistic behaviour, territoriality, competition, altruism, communication, dominance, imitation, attachment and population regulation. *I. M. Spiegel*
Pre-requisite: PSY 213EF
 SDS () SES () WDS () WES () NCO (x)
- PSY 390ES Comparative Social Behaviour 3L,N**
 Types of social organization and interaction in various animal groups will be discussed. Emphasis will be placed upon the evolution, ontogeny and biological functions of social behaviour in animal groups which possess complex social systems. *T. M. Alloway*
Pre-requisite: PSY 213EF or BIO 322EF
 SDS () SES () WDS (x) WES () NCO ()
- PSY 400E+ Thesis Research**
 In addition to periodic seminars, students will conduct independent, though supervised, research and write a thesis based upon their work.
Pre-requisites: PSY 200EF, 201ES, one year of Psychology laboratory courses and a good background in psychological course work. For fourth year students only, and with permission of a supervisory staff member
 SDS () SES () WDS (x) WES () NCO ()
- PSY 405E Current Issues in Psychology 3T,N**
 Attempts to integrate strands of psychological thinking from the various more specific courses which the student has already taken. Staff members will examine theories and findings from their own area of interest and place them in a broader

context. Enrolment in this course will be limited to 20 students.

Pre-requisite: P.I. For third and fourth year students with a B average or better in at least six PSY half-courses

SDS () SES () WDS (x) WES () NCO ()

PSY 406E Applications and General Issues in Psychology 3T,N

A seminar and practicum dealing with the history, philosophy, and application of selected topics in psychology. Particular emphasis is placed upon the application of psychological principles to college teaching. Enrolment in this course will be limited to 20 students.

Pre-requisite: P.I. For third and fourth year students with a good background in psychological course work

SDS () SES () WDS (x) WES () NCO ()

PSY 410ES Topics in Developmental Psychology 3L

A seminar course for advanced students in developmental psychology. Enrolment in this course will be limited to 20 students.

Pre-requisite: PSY 268E

SDS () SES () WDS () WES () NCO (x)

PSY 412EF† Individual Project

Designed for students desiring to pursue independent research into a specific aspect of human or animal behaviour.

Pre-requisite: PSY 200EF, 201ES, a laboratory course and P.I.

SDS () SES () WDS (x) WES () NCO ()

PSY 413ES† Individual Project

Designed for students desiring to pursue independent research into a specific aspect of human or animal behaviour.

Pre-requisite: PSY 200EF, 201ES, a laboratory course and P.I.

SDS () SES () WDS (x) WES () NCO ()

†Relevant faculty members must be consulted during preceding term. Students may take no more than the equivalent of four "project" or "thesis" half courses.

RELIGIOUS STUDIES

Faculty Advisor: Professor L. J. Elmer

Religious Studies, as an academic discipline, is based upon a recognition of the fundamental significance of religion for man and society. Its intent is to provide students with an opportunity to deepen their understanding of man and his institutions and to explore in various ways the ultimate questions and convictions which have affected the foundations of his life throughout history. Among the perspectives and methods involved in the courses are those of History, Philosophy, Psychology, Anthropology, and Sociology.

Historically, man has expressed his profoundest convictions, questions, aspirations, and fears in many ways. His art, philosophy, conduct, social institutions, even his theories about the physical universe, have conveyed and illuminated his measure of himself and of the world in which he lives. From time to time these forms of expression coalesce within a particular pattern and tradition which we may identify as a "great" or a "world" religion, but along with such religions — both within

them as well as outside them — are the individuals, each with his own personal convictions, values and interpretations of experience and of the symbols by which he represents to himself the ultimate concerns of life. The examination of all this constitutes the academic enterprise which we title Religious Studies.

A specialist programme normally requires an academically coherent combination of at least ten courses in Religious Studies or courses officially cross-listed by the Combined Departments for Religious Studies chosen in consultation with a faculty advisor so as to serve the interests of the student. It is ordinarily expected that the Programme will take four years. A coherent Programme should expose the student to a range of world religions and approaches to the study of religion. Suggested combinations of courses are outlined in the departmental brochure, available at the College Registrar's office.

REL 100E World Religions I: An Introduction 2L,W11-1/W7-9; 1T,N

An introductory course exploring the following religious traditions: Judaism, Zoroastrianism, Christianity, Islam, Hinduism, Buddhism, Confucianism, Taoism and Shintoism. Readings (in translation) from the sacred scriptures of these religions. Comparison of their ideas, attitudes, beliefs, practices, rituals and ceremonies. *S. A. Nigosian*

Exclusion: REL 220

SDS () SES () WDS (x) WES (x) NCO ()

REL 105E Contemporary Problems in Religious Ethics 2L,MW2; 1T,N

The general problems of analyzing moral issues in the context of religious studies. The specific issues to be discussed are: poverty and world development; sexual morality, abortion, genetic manipulation and euthanasia; capital punishment and civil disobedience; racism. *L. E. Schmidt*

SDS () SES () WDS (x) WES () NCO ()

REL 203 Fundamental Theological Concepts in Imaginative Literature 1L,T11; 2T,N

The problems of doubt and faith, despair and hope, flesh and spirit, vice and virtue, sin and grace, suffering and freedom, mortality and immortality, in the works of selected imaginative writers. Critical analysis, in terms of classical theological categories, of selections from such authors as Dostoyevsky, Bernanos, Mauriac, Eliot and Camus. (All works to be read in English.) *M. J. Lavelle*

SDS () SES (x) WDS (x) WES () NCO ()

REL 230E The Roles of Religion in Human Development 2L; 1T

(I)

The positive and negative roles which religion has played and continues to play in human development and in cultural progress. A general analysis of personhood and the need in authentic human living for self transcendence. The phenomenon of faith; religion as wonder; religion as meaning; and religion as health. *L. J. Elmer*

SDS () SES () WDS () WES () NCO (x)

REL 260E The Death of God in Modern Times 2L,MW10; 1T,N

The atheistic and religious response to the secularization of Western consciousness as it has developed since 1850. The writing of Kierkegaard, Marx, Nietzsche, and Dostoyevsky as foreshadowing the religious crisis of the twentieth century manifested in the thought of Sartre, Bonhoeffer, Buber and The Death of God theologians. *L. E. Schmidt*

SDS () SES () WDS (x) WES () NCO ()

- REL 261E World Religions II: Christianity 2L; 1T**
 The role of Christianity among religions, and its contribution to human ethical and religious ideas, studied in its historical development and through an analysis of its institutions, practices and teachings. (REL 261E and REL 361E are offered in alternate years.) *S. A. Nigosian*
 SDS () SES () WDS () WES () NCO (x)
- REL 262E World Religions III: Islam 2L,M1-3; 1T,N**
 The role of Islam among world religions, and its contribution to human ethical and religious ideas, studied in its historical development and through an analysis of its institutions, practices and teachings. (REL 262E and REL 263E are offered in alternate years.) *S. A. Nigosian*
 SDS () SES () WDS (x) WES () NCO ()
- REL 263E World Religions IV: Buddhism 2L; 1T**
 The role of Buddhism among world religions and its contribution to human ethical and religious ideas, studied in its historical development and through an analysis of its institutions, practices and teachings. (REL 263E and REL 262E are offered in alternate years.) *S. A. Nigosian*
Exclusion: SIS 260
 SDS () SES () WDS () WES () NCO (x)
- REL 361E World Religions V: A Comparative Study 2L,R1-3; 1T,N**
 A comparison of world religions and their role and significance in the modern secular society. Agreements and differences in teachings and practices among world religions. Arguments for and against a universal religion. The future direction of the world religions. (REL 361E and REL 261E are offered in alternate years.) *S. A. Nigosian*
 SDS () SES () WDS (x) WES () NCO ()
- REL 362E Evolution and Evil 2L,T2-4/M7-9; 1T,N**
 The thought and spirit of Teilhard de Chardin as a Christian interpretation of evolutionary theory. The problem of evil in relation to evolution. The dignity and value of human work. The relevance of Teilhard de Chardin for twentieth century man. (REL 362E and REL 230E are offered in alternate years.) *L. J. Elmer*
 SDS () SES () WDS (x) WES (x) NCO ()
- REL 375E Communications and Religious Consciousness 2L,T7-9; 1T,N**
 The development of religious identity both from a psychological and a sociological point of view, and the pervasive effects of the communications media on this development. The function of mythic acts, clothes, cosmetics, dance, music, academic structures, novels, movies, newspapers, as well as more personal forms of communication (diary, autobiography, letters, etc.) in the creation of religious consciousness. *L. E. Schmidt*
 SDS () SES () WDS () WES (x) NCO ()
- REL 400 Individual Reading and Research**
 Student-initiated projects arranged in co-operation with chosen instructors, and with the approval of the department.
 SDS () SES () WDS (x) WES () NCO ()

SLAVIC LANGUAGES AND LITERATURES

Faculty Advisor: Professor N. N. Shneidman

The Slavic literary and cultural tradition represents one of the great achievements of mankind. The Department offers a range of courses in Russian language and literature to provide access to that tradition. These courses are suitable for inclusion in a wide variety of programmes of study irrespective of whether the student has studied Russian in Grade XIII or not. Some students may specialize intensively in Russian language and literature. Others may simply wish to gain a working knowledge of Russian to aid their reading of important material in another field, as for example, science or social science. Language study in the Department emphasizes skills in using literary materials, and it also employs oral methods, combining small instructional groups with laboratory and conversational practice.

Russian literature has always been concerned with meaningful and universal human problems and has looked at them from a fresh and unique point of view. Giants of world literature such as Pushkin, Turgenev, Tolstoy and Dostoevsky, explore these problems in their nineteenth century novels, plays and poetry. The continuation and development of this same tradition under new Soviet conditions in the twentieth century by writers such as the Nobel Prize Winners, Sholokhov, Pasternak and Solzhenitsyn, makes another fascinating area of study.

The specialist programme in Russian Language and Literature requires ten SLA courses over the four-year programme. The specialist programme in Slavic Languages and Literature requires eleven SLA courses over the four-year programme. Both programmes include seven Russian "core" courses required for the Russian component in double specialization.

Erindale College offers a full range of courses required for specialization in Russian Language and Literature for the first three years of study.

First-year programme: required SLA 100, recommended SLA 110E

Second-year programme: required SLA 210, SLA 220

Third-year programme: required SLA 310, SLA 320; recommended SLA 312, SLA 316

Students who have taken grade XIII Russian are admitted to SLA 200 (Intermediate Russian Language).

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|-----------------------|--|--------------------------------|
| SLA 100 | First Year Russian
An introductory course in Modern Russian for students with little or no prior knowledge of the language. Practice in aural comprehension, speaking reading, and writing. Language laboratory practice. <i>K. Lantz</i>
SDS () SES () WDS (x) WES () NCO () | 4T,M11-1,TR11,F12; 1P,N |
| SLA 110E | Introduction to Slavic Culture and Literature (In English)
The historical development of Slavic culture, language, and literatures from the beginning to the present. Readings (in translation) selected from all periods of Russian, Ukrainian, Polish, and other Slavic literatures, including works by Dostoyevsky, Solzhenitsyn, Shevchenko, Mickiewicz. <i>N. N. Shneidman</i>
SDS () SES () WDS (x) WES () NCO () | 1L,WF11; 1T,N |
| SLA 210
(I) | Nineteenth Century Russian Literature (In English)
A study of the major novels of the nineteenth century with emphasis on the problem of the individual and society. Readings (in translation) of the works of Pushkin, | 2L,1T,M1,R1-3 |

Gogol, Turgenev, Dostoevsky, Tolstoy, and others. Students specializing in Russian will be required to do a certain amount of reading in the original. *K. Lantz*
 SDS () SES () WDS (x) WES () NCO ()

SLA 211 Masterworks of Russian Literature in Translation 1L,1T
(I)

A study of major fictional and dramatic works by nineteenth and twentieth century Russian authors, including Pushkin, Gogol, Turgenev, Tolstoy, Dostoevsky, Gorky, Pasternak, Solzhenitsyn. An examination of the psychological, political and philosophical concerns of these writers.

Exclusion: Cannot be taken simultaneously with SLA 210 or SLA 310

SDS () SES () WDS () WES () NCO (x)

SLA 220 Intermediate Russian 3T, 1P, M10-12, WF10
(I)

Continued study of Russian with language laboratory practice, oral practice, composition and conversation based on reading of literary texts and topics of current interest. *K. Lantz and N. N. Shneidman*

Pre-requisite: Slavic 100 or Grade XIII Russian

SDS () SES () WDS (x) WES () NCO ()

SLA 310 Twentieth Century Russian Literature (In English) 1L,T1-3; 1T,N

A survey of Russian literature of this century with emphasis on the Soviet period. A study of modernism; the impact of the 1917 Revolution on literature; the evolution of Soviet literary policy; contemporary problems of artistic freedom. Readings (in translation) will include works by Gorky, Bunin, Babel, Sholokhov, Pasternak, Solzhenitsyn, and others. Specialists will be required to do a certain amount of reading in the original. *K. Lantz*

SDS () SES () WDS (x) WES () NCO ()

SLA 312 Tolstoy and Dostoevsky (In English) 1L,M3-5; 1T,N

A comparative study of the writings and ideas of the two novelists. Readings (in translation) will include, in addition to other works, *War and Peace* and *Anna Karenina* by L. Tolstoy and *Crime and Punishment*, *The Idiot*, and *The Brothers Karamazov* by F. Dostoevsky. Prospective students are advised to read at least two of these works in the summer preceding the course. *N. N. Shneidman*

SDS () SES () WDS (x) WES () NCO ()

SLA 316 Literature and Politics in the Soviet Union (In English) 1L,N; 1T,N

The origins and nature of political control of literature. The impact of literary theories and writers' organizations on literature. Ideology, aesthetics, and political reality in the Soviet Union. The writer and his reaction to Party policies. Readings (in translation) of representative works of literature and relevant ideological material.

SDS () SES () WDS (x) WES () NCO ()

SLA 320 Advanced Russian 3T,M12-2,W1-3; 1P,N

Continued study of grammar, composition, and translation. Oral practice and stylistic analysis of selected texts. Extensive reading programme.

N. N. Shneidman

Pre-requisite: SLA 220 or equivalent

SDS () SES () WDS (x) WES () NCO ()

SOCIOLOGY

Faculty Advisor: Professor W. E. Kalbach

One of the essential questions sociologists have had to confront concerns the extent to which the individual is determined by society and to what extent he is a determinant of society. In examining such questions, sociologists use the methods of science as well as those of the humanistic disciplines. The answers are not self-evident and traditional explanations often prove unreliable, both as a source of understanding and as a guide to action. Sociology provides another approach for assessing existing knowledge and developing more valid theories of social behaviour and the nature of society.

Students in other fields may gain from the study of sociology a clearer understanding of the human and social condition as it relates to their chosen profession and to contemporary institutions in general. There are opportunities in Canada and abroad for professional sociologists in teaching, research, administrative and consulting positions. A professional career in sociology usually requires advanced training beyond the undergraduate level.

A *major* in sociology, for those wishing to specialize in this area, requires four full years and a minimum of seven courses in sociology plus two courses selected from political economics, history, anthropology, geography, or psychology.

The seven courses in sociology must include one course each in research methods and sociological theory, and at least two 300- or 400-series sociology courses, including one 400 level seminar in "selected topics". SOC 201 and SOC 313, or their "acceptable equivalents", will meet the methods and theory requirements (check the St. George Campus Calendar, "suggested programmes of study" in sociology for acceptable equivalents), and *it is strongly recommended that SOC 201 be taken during the second year.*

A *minor* in sociology requires a minimum of six courses in sociology, including one course each in research methods and sociological theory, and at least two 300- or 400-series sociology courses.

Students entering this programme should enrol with the Department of Sociology before the end of the first term in their second and subsequent year; and should seek advice from teachers in the Department while working out their programmes.

SOC 101	Introduction to Sociology	2L,MWF10/TR10/11/1/T-7-9; 1T,N
	An introduction to the basic concepts, principles, and methods of sociology as a discipline for the study of society. <i>Staff</i>	
	SDS () SES (x) WDS (x) WES (x) NCO ()	

In all 200-series courses the student will be assumed to have the background knowledge provided by Sociology 101.

SOC 201E	Methods of Social Research	2L,MWF11; 1P,N
	An introduction to sociological research procedures and elementary statistics. (This course should be taken in the second year.) <i>J. Simpson</i>	
	SDS () SES (x) WDS (x) WES () NCO ()	

SOC 202	Structure of Interpersonal Relations	2L,T7-9; 1T,N
	A study of patterned relationships, social roles and social expectations which arise out of interaction among individuals. <i>J. Kerrin</i>	
	SDS () SES () WDS (x) WES (x) NCO ()	

- SOC 205 Urban Sociology 2L,T1-3,R2; 1P,N**
Examines a city both as a significant development in world civilization and a working mechanism guided by contemporary policies. Studies human behaviour in its multifaceted relations with the urban environment. *H. Breslauer*
Pre-requisite: SOC 101
SDS () SES (x) WDS (x) WES () NCO ()
- SOC 212 Sociology of Deviance 2L,MW2; 1T,N**
A sociological analysis of deviant behaviour which examines theories of its genesis, social definition, maintenance, control, and social consequences. *J. Hagan*
SDS () SES () WDS (x) WES () NCO ()
- SOC 213E Social Stratification 2L,MWF1/W7-9; 1T,N**
Examines the various systems by which, in all human societies, rewards (such as prestige, power, wealth, and others) are differentially distributed, and the principal theories which have attempted to account for these phenomena. *E. Silva*
SDS () SES () WDS (x) WES (x) NCO ()
- SOC 214E Sociology of the Family 2L,TR11/T7-9; 1T,N**
Development of the contemporary Western family with special emphasis on the changing relations among its members.
SDS () SES () WDS (x) WES (x) NCO ()
- Second-year students may be admitted to 300-level courses if space is available. Third-year courses may not be offered every year. Students interested in specific courses and especially those for which instructors have not been assigned are advised to check with the Faculty Advisor, or the supplementary calendar before final registration.
- SOC 303 Canadian Society 2L,N; 1T,N**
An analysis of the changing structure of Canadian society.
SDS () SES () WDS (x) WES () NCO ()
- SOC 304 Social Change 2L,TR11; 1T,N**
An examination of technical, social, and ideological changes accompanying industrialization in both developed and underdeveloped countries. *J. Heap*
SDS () SES () WDS (x) WES () NCO ()
- SOC 305 Sociology of Religion 2L,N; 1T,N**
Various theories of religious behaviour and organization are examined with special attention given to the role of religion in relation to social change and social integration. Current research and methods of study will also be stressed. *J. Simpson*
SDS (x) SES () WDS (x) WES () NCO ()
- SOC 306EF The Sociology of Crime and Delinquency 2L,N; 1T,N**
An examination of delinquent and criminal life-styles from the perspectives of social psychology, the sociology of occupations, and the sociology of law. The etiology, social history, organization, and societal response to different types of

crime and delinquency are considered. Special attention is given to the career criminal.

Pre-requisite: SOC 212, or P.I.

SDS () SES () WDS (x) WES () NCO ()

SOC 306ES Sociology of Mass Communication 2L,T5-7

The course first critically appraises some modern communications theorists — Innis, McLuhan, Meier — and then dissects some old and new Canadian media institutions. Special emphasis on the origin and destiny of innovation, governmental media organizations, and their articulation with media institutions. Participants familiarize themselves with media techniques by creating a project that utilizes one medium. Enrolment limited.

SDS () SES () WDS () WES (x) NCO ()

SOC 310EF Race and Ethnic Relations 2L,T5-7; 1T,N

Social processes involved in minority relations in terms of race and ethnicity and their social, economic, and political consequences. *M. Spencer*

SDS () SES () WDS (x) WES () NCO ()

SOC 311 Sociology of Education 2L,R7-9; 1T,N

An analysis of the relationship between education and society in comparative perspective; the consequences of the internal structure of educational systems; and current controversies surrounding the function and structure of educational institutions.

SDS () SES () WDS (x) WES (x) NCO ()

SOC 312 Population and Society 2L,W10,12; 1T,N

An analysis of population change and consequences from both global and Canadian perspectives. Trends in mortality, fertility and migration are examined relative to their significance for growth, and their relation to social structure and social change.

SDS () SES () WDS (x) WES () NCO ()

SOC 313 Sociological Theory 2L,M4-6; 1T,N

The development of sociology and contributions of particular sociologists whose concepts not only have historical interest but also illumine the subject matter and method of contemporary society. *P. Lorion*

SDS () SES () WDS (x) WES () NCO ()

SOC 314 Society, Organizations, and the Individual 2L,MWF9; 1T,N

An analysis of formal organizations, e.g. hospitals, prisons, schools, business firms, government agencies, etc., focusing upon their structural characteristics, effects of social environments, and the influence upon their members. *J. Simpson*

SDS () SES () WDS (x) WES () NCO ()

SOC 315E Interaction in Institutional Settings 2L,N

Ethnographic description and comparative analysis of standard social occasions taking place within the domains of the corporation, the church, school, government, and the court. The primary course objective is the observation and documen-

tation of the everyday enactment of institutional "rules of the game" for social interaction.

SDS () SES () WDS (x) WES () NCO ()

SOC 324E Political Sociology 2L,M5-7; 1T,N

The social basis of politics. Culture and social organization in their relation to power and its application. *E. Silva*

SDS () SES () WDS () WES (x) NCO ()

SOC 323ES Environmental Sociology 3L

An examination of the multi-faceted relationship between the physical environment, especially the man-made environment (e.g. buildings) and human behaviour. Principles underlying man's use of space and the potential significance of the environment as a variable in the study of human behaviour will be considered.

H. Breslauer

Pre-requisites: SOC 101, SOC 205E or P.I.

SDS () SES () WDS () WES () NCO (x)

SOC 329ES Collective Behaviour 2L,T5-7; 1T,N

An analysis of non-conventional social action as seen in crowd and mass behaviour (panics, riots, demonstrations, crazes, etc.) involving a study of relationships between forms of collective action and the more conventional order, i.e., the relationship of collective behaviour to social action and control, stability and change.

SDS () SES () WDS (x) WES () NCO ()

SOC 340E Concepts, Methods, and Values in Urban Studies 1L,N; 3P,N

(Same as GGR 340E)

A course designed for students concentrating in urban studies irrespective of major disciplinary area. It provides a survey of a variety of types of urban study from the social science perspective. The major emphasis is on linkages between the way in which urban phenomena and processes are conceptualized, the methods employed to study them and the often implicit system of values in which such investigations are framed. Urban researchers, both academic and applied will be invited to discuss their research in the context of these issues. *H. Breslauer, H. Andrews, G. Gad*
Pre-requisites: Either SOC 205, or GGR 241 or P.I.; and, either SOC 201 or GGR 271 and GGR 202EF, or P.I.

Co-requisites: At least one other than urban course, e.g., SOC 328ES, GGR 341EF, 345ES, 333ES, 379EF, 346ES etc., or P.I.

Exclusion: GGR 340E

SDS () SES () WDS (x) WES () NCO ()

SOC 390 Individual Studies

Students who wish to explore a subject in Sociology not offered in the regular programme, or to a greater depth than was possible in any course already completed, should submit a specific proposal to a professor not later than October 1st. Preference is given to students with at least B+ standing in Second Year, and such registration is possible only when a faculty member is willing and available to supervise.

Not more than one Individual Studies course, SOC 390, 391F, or 392S, can be taken from the same instructor.

SDS () SES () WDS (x) WES () NCO ()

SOC 391F Individual Studies

(See description, SOC 390.)

SDS () SES () WDS (x) WES () NCO ()

SOC 392S Individual Studies

(See description, SOC 390.)

SDS () SES () WDS (x) WES () NCO ()

Fourth-year courses provide the opportunity for greater specialization than is generally possible in second and third years. The actual content for "selected topics" courses, and additional pre-requisites (if any) will be set by the instructor offering the course. Students who wish more information concerning specific courses and topics to be covered are advised to see the Faculty Advisor for Sociology.

SOC 410EF Selected Topics in Research Methods I 2L,R10-12; 1P,N

Pre-requisites: SOC 201 and at least two additional sociology courses beyond the introductory level, or P.I.

SDS () SES () WDS (x) WES () NCO ()

SOC 411ES Selected Topics in Research Methods II 2S,R10-12; 1P,N

Pre-requisites: Same as SOC 410EF

SDS () SES () WDS (x) WES () NCO ()

SOC 412EF Selected Topics in Sociological Theory I 2L,R2-4

Pre-requisites: SOC 313, and at least two additional sociology courses beyond the introductory level, or P.I.

SDS () SES () WDS (x) WES () NCO ()

SOC 413ES Selected Topics in Sociological Theory II 2L,R2-4

Pre-requisites: Same as SOC 412EF

SDS () SES () WDS (x) WES () NCO ()

SOC 420EF Selected Topics in Interpersonal Relations I 2S,M3-5; 1P,N

Pre-requisites: SOC 202, and at least two additional sociology courses beyond the introductory level, or P.I.

SDS (x) SES () WDS (x) WES () NCO ()

SOC 420EH Selected Topics in Interpersonal Relations

Same as SOC 420EF

SDS (x) SES () WDS () WES () NCO ()

SOC 421ES Selected Topics in Interpersonal Relations II 2S,M3-5; 1P,N

Pre-requisites: Same as SOC 420EF

SDS (x) SES () WDS (x) WES () NCO ()

- SOC 421EH Selected Topics in Interpersonal Relations II**
 Same as SOC 421ES
 SDS (x) SES () WDS () WES () NCO ()
- SOC 422EF Selected Topics in Urban Sociology and Population I** 2S,N; 1P,N
Pre-requisite: SOC 312 for population topics, and SOC 205 for topics in urban sociology, and at least two additional courses in sociology beyond the introductory level, or P.I.
 SDS () SES () WDS (x) WES () NCO ()
- SOC 423ES Selected Topics in Urban Sociology and Population II** 2S,N; 1P,N
Pre-requisite: Same as SOC 422EF
 SDS () SES () WDS (x) WES () NCO ()
- SOC 424EF Selected Topics in Social Stratification I** 2S,N; 1P,N
Pre-requisite: SOC 213, and at least two additional sociology courses beyond the introductory level, or P.I.
 SDS () SES () WDS (x) WES () NCO ()
- SOC 425ES Selected Topics in Social Stratification II** 2S,N; 1P,N
Pre-requisite: Same as SOC 424EF
 SDS () SES () WDS (x) WES () NCO ()
- SOC 490 Independent Research**
 Open only when a faculty member is willing and available to supervise, with preference to students with at least B+ standing in Third Year. Not more than one Independent Research course, SOC 490, 491F, or 492S, can be taken from the same instructor.
 SDS () SES () WDS (x) WES () NCO ()
- SOC 491F Independent Research**
 (See SOC 490.)
 SDS () SES () WDS (x) WES () NCO ()
- SOC 492S Independent Research**
 (See SOC 490.)
 SDS () SES () WDS (x) WES () NCO ()

SPANISH

Faculty Advisor: Professor M. Scarth

Hispanic culture offers a variety probably unrivalled by any other modern western culture. In the Middle Ages Spain was the vital point of contact between the Christian, Jewish and Islamic civilizations; in its Golden Age it led the way in the exploration and settlement of the New World,

and established a great empire in the process; today it is estimated that the Spanish language is the third most widely-spoken in the world.

Spanish studies has a twofold goal: the first, to learn to speak, understand, read and write with ease a language shared by over two hundred million people; the second, to become familiar with the civilization and intellectual life of the Hispanic world through study of the artistic and literary phenomena of that world.

Courses are offered for beginners in the language, as well as those with Grade XIII standing or equivalent. Stress is laid on both the spoken and written language and the language laboratory is used to promote fluency. After the first year all courses, both literary and linguistic, are conducted in Spanish as much as possible to give the student maximum exposure to the language.

Two courses, Spanish Civilization and Culture, and Latin American Civilization and Culture, are offered in English and may be taken by students in any year. These courses provide comprehensive views of the social, political, artistic and intellectual developments of Spain and Latin America and have proven useful not only to students studying the language but also to those who may have an interest in the Hispanic scene for other reasons.

Core language courses are offered in all years. Students wishing to specialize would, in addition to these core courses, follow programmes in literature and linguistics designed to allow them to enter Graduate Studies in Spanish or Type A courses at the Faculty of Education. Students may elect a single specialization (nine courses) or a combined specialization programme of Spanish and any other discipline (seven).

Opportunities for qualified teachers exist at the secondary and university levels. In addition, the study of Spanish as of other modern languages, may prepare students for such careers as those in the foreign service, journalism, publishing, commercial and cultural relations between Canada and Spanish-speaking countries. The development of closer Canadian relations with Spain and Latin America will extend the range of opportunity for those well versed in the Hispanic field.

In addition to Erindale course offerings, other courses may be taken on the St. George campus with the permission of the Faculty Advisor. Students may also wish to participate in the Third Year Abroad programme.

Early consultation with the staff is essential if the student is to be assured of a programme suitable for his needs and interests.

SPA 100 Beginning Spanish 3L,MWF10/12/T7-9; 2P,N

For those who have had no previous background in Spanish. By the end of the year, students should have sufficient skill in the written and spoken language to be able to specialize in Spanish if they wish. Emphasis will be placed on oral practice both in class and in the language laboratory. *M. Scarth, J. Webster*

Exclusion: GR. XIII SPA or equivalent

SDS () SES () WDS (x) WES (x) NCO ()

SPA 220 Intermediate Grammar and Composition 2L,TR12/M7-9; 1P,N

(I)

Conducted mainly in Spanish and designed for those who have completed a basic course in the language. A grammar review and intensive written and oral practice provide an opportunity for a greater range of expression and a broader understanding of the language. *O. Hegyi*

Pre-requisite: SPA 100E/Gr. XIII or equivalent

SDS () SES () WDS (x) WES (x) NCO ()

- SPA 246EF Introduction to Modern Spanish Drama 2L,MW1**
 (I) An introduction to the modern Spanish stage as portrayed by several leading playwrights in a variety of dramatic productions. In Spanish as much as possible. *M. Scarth*
Pre-requisite: SPA 100E/Gr. XIII or equivalent
 SDS () SES () WDS (x) WES () NCO ()
- SPA 257ES Readings from Modern Spanish Prose 2L,MW1**
 (I) Several modern short stories and essays will be studied not only for their literary value but for the insight they provide into social and intellectual problems. In Spanish as much as possible. *M. Scarth*
Pre-requisite: SPA 100E/Gr. XIII or equivalent
 SDS () SES () WDS (x) WES () NCO ()
- SPA 291E Spanish Civilization and Culture (In English) 2L,N**
 (I) Presents an overall view of the activities of the Spanish people from the early settlers of the peninsula to the current scene. Using the history of the country as a basic frame, it deals with the major currents of thought and the major accomplishments in literature, art, architecture and music. Slides, music and other illustrative material will be used. *M. Scarth, J. Webster*
Exclusion: Former SPA 191
 SDS () SES () WDS (x) WES () NCO ()
- SPA 292E Latin American Civilization and Culture (In English) 2L,R7-9**
 (I) From the pre-Columbian civilization (Aztec, Maya and Inca) to the present; deals with significant manifestations in literature, art, music, architecture. Discussion of social, economic and political problems of Latin America. Illustrative material. *E. Neglia*
Exclusion: Former SPA 192
 SDS () SES () WDS () WES (x) NCO ()
- SPA 320 Creative Spanish 2L,N; 1P,N**
 Conducted mainly in Spanish and designed to meet the needs of those who already have a good basic knowledge of the language. Emphasis on improvement of style, translation, essay writing and oral practice. *E. Neglia*
Pre-requisite: SPA 200E or equivalent
 SDS () SES () WDS (x) WES () NCO ()
- SPA 325EF History of the Spanish Language 2L,N**
 Begins with an introduction to phonetics, phonology and basic concepts of linguistics. Proceeds to the study of the evolution of Spanish from its vulgar Latin origins up to the present day. An attempt will be made to relate linguistic development to historical and cultural aspects. Some general knowledge of Latin is desirable. Interest in theoretical linguistics and a working knowledge of Spanish will be assumed. Given in Spanish. *O. Hegyi*
Pre-requisite: SPA 220E or equivalent
 SDS () SES () WDS (x) WES () NCO ()

- SPA 346EF** **Modern Spanish Drama** **2T**
 A study of the major Spanish playwrights of the 20th century. It will include such authors as Benavente, Vallen-Inclan, García Lorca and Buero Vallejo. *E. Neglia*
Pre-requisite: SPA 220E or equivalent
 SDS () SES () WDS () WES () NCO (x)
- SPA 350** **Spanish Literature of the Golden Age** **3L,MWF10**
 A study, in Spanish, of Spain's most interesting and richest period, comprising the sixteenth and seventeenth centuries. Original texts — poetry, drama and novel — will be studied as reflecting the society of the age and its changing values. Special attention will be given to the picaresque novel and Cervantes. *O. Hegyi*
Pre-requisite: SPA 220E or equivalent and one other course of the 200 or 300 series.
 SDS () SES () WDS (x) WES () NCO ()
- SPA 356S** **Modern Spanish Novel** **2L,N**
 Covers the period from the beginning of the realistic novel in the nineteenth century up to the present day. Students will be expected to do a certain amount of reading of original texts as a preparation for their classes and a good working knowledge of Spanish is assumed as the course will be given in Spanish. *O. Hegyi*
Pre-requisite: SPA 220E or equivalent and P.I.
 SDS () SES () WDS (x) WES () NCO ()
- SPA 366ES** **Modern Spanish American Poetry** **2L,N**
 A study of some major poets and the different currents in Spanish American poetry; Pablo Neruda, Cesar Vallejo for special study. *E. Neglia*
Pre-requisite: One or more SPA 200-series courses or equivalent
 SDS () SES () WDS (x) WES () NCO ()
- SPA 376EF** **Modern Spanish American Drama** **2L**
 An examination of the major 20th century themes and techniques. Plays selected from at least five of the following authors: Carlos Solórzano, Osvaldo Dragún, René Marqués, Emilio Carballido, Egon Wolff, Aguilera-Malta, Jorge Díaz, Enrique Buenaventura, Carlos Gorostiza. *E. Neglia*
Pre-requisite: SPA 220E or equivalent
 SDS () SES () WDS () WES () NCO (x)
- SPA 382EF** **Modern Spanish American Novel** **2L,N**
 A study of the representative novels of Spanish America, including the regional and Indianist novel as well as that of the Mexican revolution. *E. Neglia*
Pre-requisite: One of more SPA 200 series courses or equivalent
 SDS () SES () WDS (x) WES () NCO ()
- SPA 385EF** **Spanish American Story and Essay** **2L**
 Representative works of outstanding Spanish American essayists and short story writers including Sarmiento, Rodó, Quiroga, Borges, etc. will be studied. *E. Neglia*
Pre-requisite: One or more SPA 200 series courses or equivalent
 SDS () SES () WDS () WES () NCO (x)

SPA 393E	Spanish History 1815 to Present (For description see HIS 393E.) SDS () SES () WDS () WES () NCO (x)	2T
SPA 394E	Spanish History 1469–1815 (For description see HIS 394E.) SDS () SES () WDS (x) WES () NCO ()	2T,N
SPA 420H	Advanced Composition and Oral Practice Designed for those who already have a good knowledge of the language. Emphasis on ability to write and speak good Spanish through translation, essays, letters, class discussions, etc. <i>J. Webster</i> <i>Pre-requisite:</i> SPA 320E or equivalent SDS () SES () WDS (x) WES () NCO ()	2T,N
SPA 430F	Mediaeval Spanish Verse The development of epic poetry from the <i>Cid</i> to the romances. The mozarabic <i>jarchyas</i> and the origins of the lyric poetry of love. The <i>mester de clerecía</i> , the “bizantine” matter, and the <i>Libro de Buen Amor</i> . The <i>literatura de protesta</i> and other committed poetry. 15th century allegorical lyric and epic. <i>J. R. Webster</i> <i>Pre-requisite:</i> SPA 220E or equivalent SDS () SES () WDS (x) WES () NCO ()	2L,N; 1T,N
SPA 450S	Mediaeval Spanish Literary Prose The novelistic and epic elements of the early chronicles. Spain as point of departure for the development of the oriental frame story and <i>literatura de ejemplos</i> . The early <i>novelas caballerescas</i> . The origin of the allegorical and sentimental novel. The mediaeval aspects of the first <i>Celestina</i> . <i>J. R. Webster</i> <i>Pre-requisite:</i> SPA 220E or equivalent SDS () SES () WDS (x) WES () NCO ()	2L,N; 1T,N

STATISTICS

(See Mathematics)

STA 202EF (I)	Statistics Acquaints beginning students in the biological, physical and social sciences with the fundamentals of statistics. The course discusses statistical procedures for describing large quantities of data and for making inferences about populations on the basis of samples. SDS () SES () WDS (x) WES (x) NCO ()	2L,MW9/W7-9; 2T,N
STA 212ES	Application of Statistics A continuation of STA 202EF including analysis of variance and linear regression. Students interested in this course should consider carefully the similar specialized	2L,MW9/W7-9; 1T,N

courses in other departments and also the STA 232, 332, 342 sequence.

Exclusion: STA 232/242/252, PSY 200S, ECO 230ES

Pre-requisite: STA 202EF

SDS () SES () WDS (x) WES (x) NCO ()

- STA 242E Probability and Statistics 2L,MW9; 1T,N**
Elements of probability theory, common distributions, point and interval estimation, standard significance tests, introduction to least squares and analysis of variance.
Exclusion: STA 212ES/232/252
Pre-requisites: MAT 110EF, 120ES/130/135/135E/134
SDS () SES () WDS (x) WES () NCO ()
- STA 332F Experimental Design 2L,TR9; 1T,N (offered if staff available)**
The statistical aspects of collecting and analyzing experimental data, analysis of variance, orthogonal designs.
Pre-requisite: STA 232 (C or better) or P.I.
SDS () SES () WDS (x) WES () NCO ()
- STA 342S Regression Analysis 2L,TR9; 1T,N (offered if staff available)**
Regression theory with applications to the analysis of non-orthogonal data.
Pre-requisite: STA 232 (C or better) or P.I.
SDS () SES () WDS (x) WES () NCO ()
- STA 347S Probability and Applications 2L,N; 1T,N (offered if staff available)**
Probability theory (extending elementary results), especially conditional probability, random variables (multi-dimensional), characteristic functions, law of large numbers. Introduction to stochastic processes with a selection from the following topics: Markov chains (discrete or continuous time), renewal theory, covariance stationary processes, turbulence and noise.
Exclusion: STA 357, STA 357E
Pre-requisite: STA 242 or equivalent and MAT 239E/319F
SDS () SES () WDS (x) WES () NCO ()
- STA 432EF Advanced Statistics 2L,N; 1T,N (offered if staff available)**
Topics in statistics selected from experimental design, sequential procedures, multivariate analysis, time series and others.
Pre-requisite: STA 242 or equivalent
SDS () SES () WDS (x) WES () NCO ()

SURVEY SCIENCE

Faculty Advisor: G. Gracie

Survey science is used to measure and represent the geometric and physical features of our environment. Accordingly, survey science is of fundamental importance in a variety of activities, which may include mapping the earth's surface and charting its waters, establishing land boundaries and

delineating property, searching for and inventorying natural resources, studying the figure of the earth, and locating transportation facilities and other engineered structures. Recent activities include topographic mapping of the moon's surface using metric photography acquired by Apollo spacecraft.

Survey science relates to many other disciplines, particularly those which deal with the earth and its environment. Moreover, increased sophistication in measuring and data processing procedures has brought survey science into close alignment with the basic disciplines of mathematics, statistics, computer science and physics.

Students intending to become professional surveyors will satisfy the academic requirements of the Association of Ontario Land Surveyors by completing a four-year programme of study which includes: MAT 135, PHY 110E or PHY 135E, EPS 120, CSC 108F or CSC 148E, STA 232/242, GGR 241E, GGR 373E, SUR 100E/200E, SUR 210E/303E, SUR 215EF/305EF, SUR 220E, SUR 230E, SUR 240ES, SUR 310E, SUR 320ES, SUR 405EF, SUR 410EF, SUR 420E, and SUR 430ES.

SUR 200 Introduction to Surveying 2L,TR11; 3P,N

(I)

Introduction to the procedures used to acquire field data, process survey information, and present results in various forms, with consideration given to geodetic, cartographic, hydrographic, cadastral and engineering applications.

Pre-requisit: Grade XIII R & F, C

Exclusion: SUR 100 (1972-73 calendar)

SDS () SES () WDS (x) WES () NCO ()

SUR 220 Photogrammetry 2L,TR9; 3P,N

The metric camera, interior and exterior orientation of the metric photograph, the projective model, space resection and intersection, relative and absolute orientation. Photogrammetric instrumentation, including stereoplotters, comparators, rectifiers and orthophoto equipment. Application of photogrammetry to map compilation and other areas.

Pre-requisites: MAT 135 and PHY 110/135E

SDS () SES () WDS (x) WES () NCO ()

SUR 230 Land Surveying 2L,TR1/R7-9; 3P,N

Principles and procedures for precise measurement of direction, distance, height and depth, including electromagnetic distance measurement and positioning. Curve geometry. Introduction to development of a survey system. Cadastral, cartographic and engineering applications.

Pre-requisites: MAT 135, PHY 110E/135E and SUR 100E/200E

SDS () SES () WDS (x) WES (x) NCO ()

SUR 240S Measurement Theory and Adjustment of Observations 2L,MW1/R7-9; 2P,N

The statistical theory of measurement, including the concepts of measurement and error, measures of precision and accuracy, error propagation, weighting of observations, error ellipses and ellipsoids, and the statistical properties of 2- and 3-dimensional errors. The method of least squares, with application to several problems.

Co-requisite: STA 242

SDS () SES () WDS (x) WES (x) NCO ()

- SUR 303E Geodesy 2L,N; 2P,N**
 The figure of the earth and the precise determination of position and height on or near the earth's surface. Fundamentals of geometrical geodesy, physical geodesy, satellite geodesy and map projections.
Pre-requisites: MAT 135, PHY 110E/135E
Exclusion: SUR 210E
 SDS () SES () WDS (x) WES () NCO ()
- SUR 305EF Geodetic Astronomy 2L,N; 3P,N**
 The celestial sphere and its coordinate systems, variations in celestial coordinates, time systems, star catalogues and instrumentation. Determination of astronomic azimuth, latitude and longitude.
Pre-requisite: MAT 135, PHY 110E/135E, SUR 100E/200E
 SDS () SES () WDS (x) WES () NCO ()
- SUR 310E Survey Law 3L,MWF11/M7-9**
 Principles of evidence, land survey systems, real property law, transfer of land ownership, land boundaries and descriptions; the Surveys Act and other legislation.
Pre-requisite: P.I. Intending students are advised to contact the instructor as at early a date as possible, preferably prior to June 1st.
 SDS () SES () WDS (x) WES () NCO ()
- SUR 320S Data Management and Representation 2L,TR11; 2P,N**
 Cartographic, photographic, digital and other forms of data representation. Data transfer, storage and retrieval. Data bases and data banks. Automated and interactive systems.
 SDS () SES () WDS (x) WES () NCO ()
- SUR 331F Special Topics in Survey Science**
 Study of selected topics in Survey Science not covered in the regular courses.
Pre-requisite: P.I.
 SDS () SES () WDS (x) WES () NCO ()
- SUR 332S Special Topics in Survey Science W7-9/N**
 Study of selected topics in Survey Science not covered in the regular courses.
Pre-requisite: P.I.
 SDS () SES () WDS (x) WES (x) NCO ()
- SUR 405F Field Survey Projects**
 An intensive three-week session in the field covering various aspects of survey project design, data acquisition, data reduction and layout. The course is held on campus and runs from August 18 through September 5, 1975.
Pre-requisites: SUR 303, SUR 305F, SUR 230, SUR 240S
 SDS () SES () WDS (x) WES () NCO ()
- SUR 410F Survey Control 2L,N; 2P,N**
 The fundamentals of survey control systems; specific control systems, such as

geodetic triangulation and trilateration, photogrammetric triangulation, and satellite triangulation.

Pre-requisites: SUR 220E, SUR 405F

SDS () SES () WDS (x) WES () NCO ()

SUR 420

Survey Designs and Synthesis

2L,N; 3P,N

Consideration of the factors involved in the design and synthesis of cadastral, cartographic, hydrographic and engineering surveys; integrated survey systems; land development and management.

Pre-requisite: SUR 310E

Co-requisite: SUR 410EF

SDS () SES () WDS (x) WES () NCO ()

SUR 430S

Professional Practice

3L,N

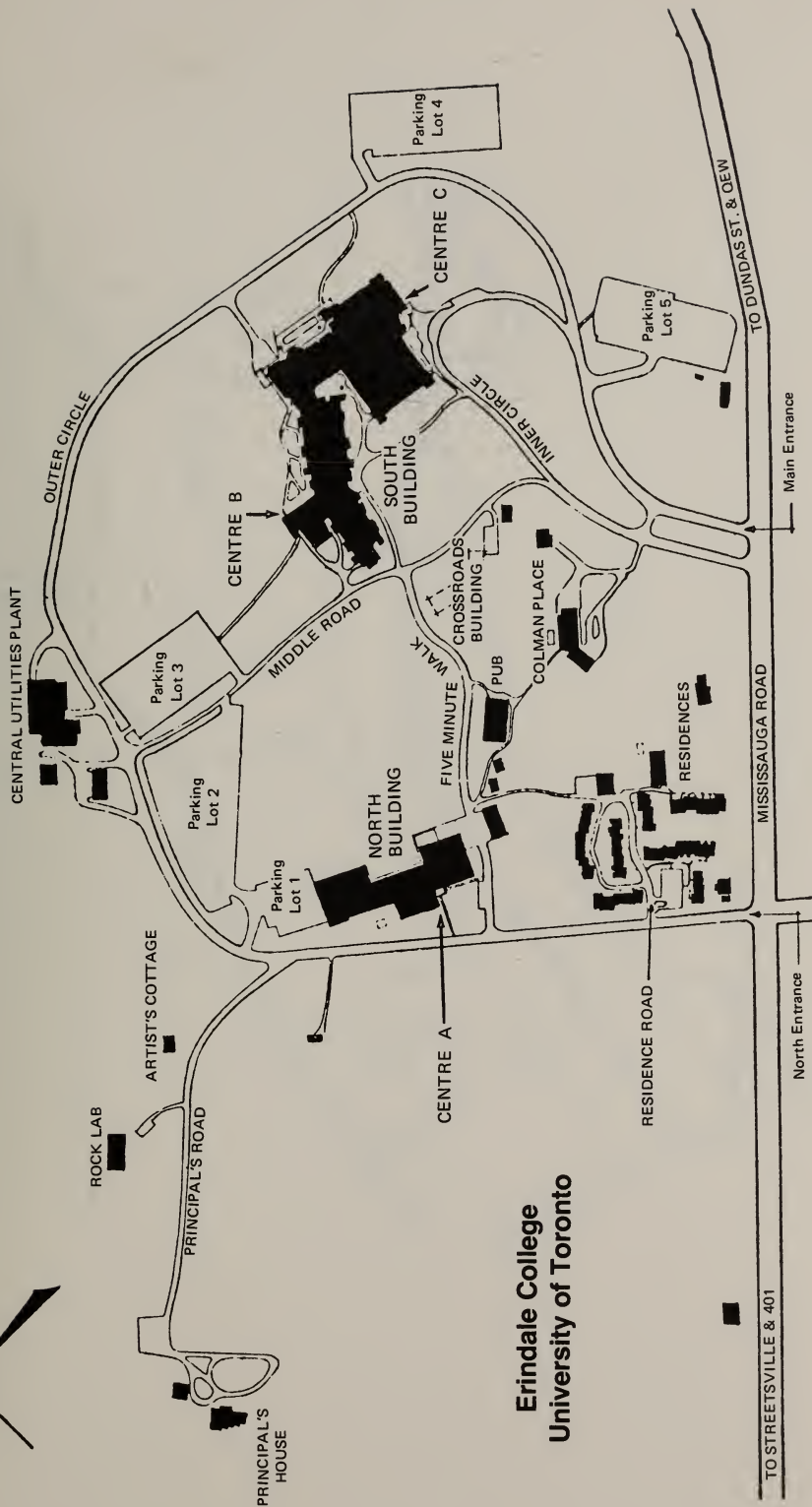
The history and tradition of surveying; professional ethics and responsibility; land planning and management law; fundamentals of business management.

Pre-requisite: SUR 310E

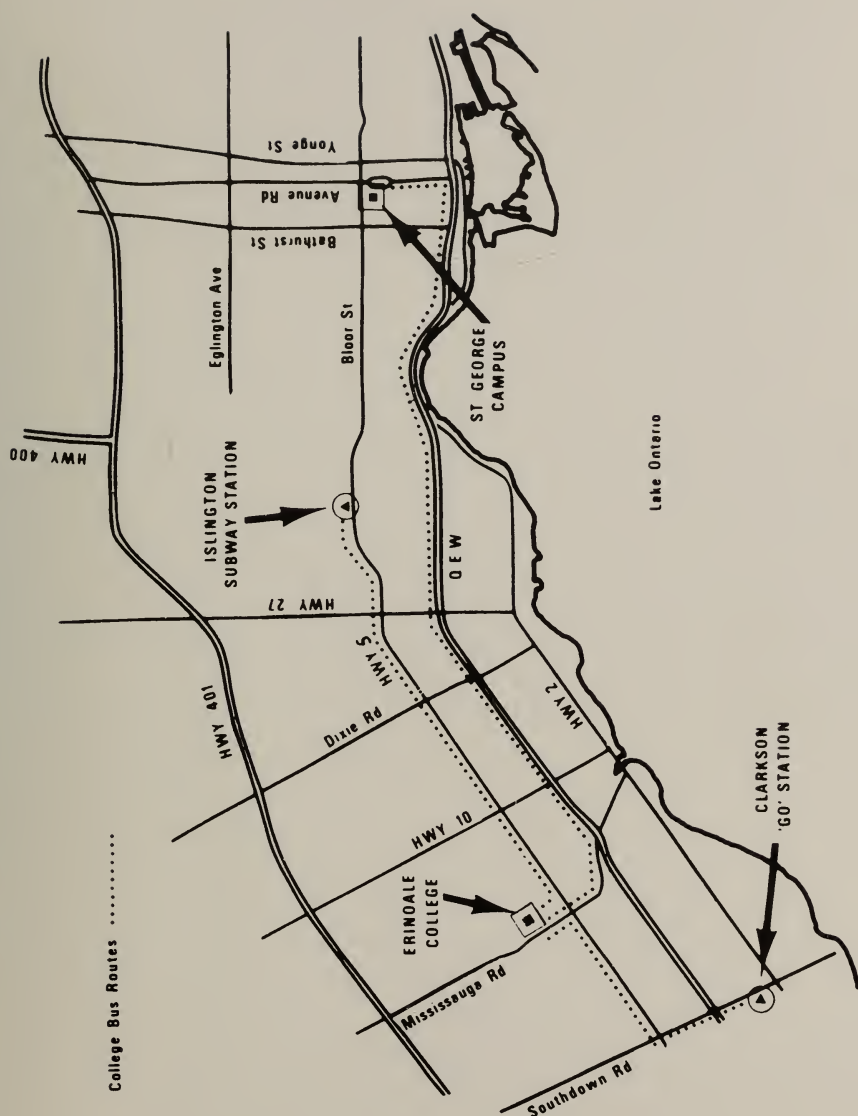
SDS () SES () WDS (x) WES () NCO ()

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Erindale College University of Toronto



College Bus Routes

